



# amateur radio

Vol. 34, No. 12  
DECEMBER  
1966

**25c**

Registered at G.P.O., Melbourne, for  
transmission by post as a periodical



# "AMATEUR RADIO"

JOURNAL OF THE WIRELESS INSTITUTE OF AUSTRALIA FOUNDED 1910

DECEMBER 1966

Vol. 34, No. 12

**Editor:**

K. E. Pincott ..... VK3AJF

**Assistant Editor:**

K. M. COCKING ..... VK3ZFQ

**Publications Committee:**

G. W. Baty (Secretary) ..... VK3AOM

A. W. Chandler (Circulation) ..... VK3LC

E. C. Manifold ..... VK3EM

W. E. J. Roper ..... VK3ARZ

**Discussions:**

Ken Gillespie ..... VK3GK

Clem Allen ..... VK3ZIV

Ian Smith ..... 38 Green St., Noble Park

**Advertising Enquiries:**

C/o. P.O. Box 36, East Melbourne, C2, Vic.

or

Mrs. BELLARIS, Phone 41-3535, 478 Victoria Parade, East Melbourne, C2, Victoria. Hours 10 a.m. to 3 p.m. only.

**Publishers:**

VICTORIAN DIVISION W.I.A.

Reg. Office: 478 Victoria Pde., East Melbourne, C2, Victoria.

**Printers:**

"RICHMOND CHRONICLE," Phone 42-2419. Shakespeare St., Richmond, E.I. Vic.

★

All matters pertaining to "A.R." other than subscriptions, should be addressed to:

THE EDITOR,

"AMATEUR RADIO,"

P.O. BOX 36,

EAST MELBOURNE, C2, VIC.

Acknowledgments will be sent following the Committee meeting on the second Monday of each month. All Sub-Editors should forward their articles to reach "A.R." before the 5th of each month. Any item received after the Committee meeting will be held over until the next month. Publication of any item is dependent upon space availability, but in general about two months may elapse before a technical article is published after consideration by the Publications Committee.

★

Members of the W.I.A. should refer all enquiries regarding delivery of "A.R." direct to their local Secretary. Subscriptions to "A.R." direct. Non-members of the W.I.A. should write to the Victorian Division, C/o. P.O. Box 36, East Melbourne. Two months' notice is required before a change of mailing address is received. Readers should note that any change in the address of their transmitting station must, by P.M.G. regulation, be notified to the P.M.G. in the State of residence, in addition "A.R." should also be notified. A convenient form is provided in the "Call Book."

★

Direct subscription rate is \$3.00 a year, post paid, in advance. Issued monthly on the first of the month, January edition excepted.

## FEDERAL COMMENT

\*

## A.O.C.P. EXAMINATIONS

The following letter is of importance to all prospective Amateurs and S.w.l.'s. Please note for the future.

Federal Secretary, W.I.A.,  
Dear Sir,

As you are aware, following the discussions which took place on the revision of the Amateur Handbook, it was decided to reduce the frequency of examinations for Amateur Operators' Certificates from four to two a year, to be held on the third Tuesday in February and August, with supplementary examinations on the third Tuesday in May and November in Section L (Telegraphy).

In the light of developments which have occurred since the discussions it has now been decided to introduce the new examination arrangements as from August, 1967. Quarterly examinations will be held in January and April, 1967, as usual but not in July, 1967. The first supplementary examination in the subject of telegraphy will be held in November, 1967.

The selection of August, 1967, for the introduction of the proposed new arrangements was influenced largely by the period which was considered necessary for adequate notice to be given to all interested parties. It is expected that this date should provide sufficient time also for the Wireless Telegraphy Regulations to be amended as required and for the new Handbook to be printed and made available so that the paper on the subject of Regulations for the first examination to be held under the new arrangements may be based on the revised rules.

It would be appreciated if you would be good enough to arrange for the matter to be publicised through the normal channels of the Institute, please.

Yours faithfully,

C. M. Carroll,  
for Director-General.

Federal Council and the Executive of the Wireless Institute of Australia wish all members the compliments of the Season and bright prospects for 1967.

## CONTENTS

A Simple Transistor Tester	3	John Moyle Memorial National Field Day Contest, 1967	11
Single Sideband—Power Measurements	6	Prediction Charts for December 1966	21
How is Your Dial Calibration?	7	New Call Signs	13
Technical Correspondence:		DX	13
Transceiver Power Supplies	5	SWL	16
"The Mode of Power"	3	VHF	15
Sideband:		Youth Radio Clubs	15
Netting with Transceivers	9	Federal and Divisional Monthly News Reports	17
Bad Sideband Signals	9	Index to Volume 34—1966	24
A.R.R.L. International DX Competition	7		
W.I.A. DX.C.C.	10		

### VACUUM TUBE VOLT METER "KYORITSU," MODEL K-142

Highly dependable for measurements of voltages from d.c. to r.f. output (db) and d.c. resistance.

A.e. volts: Sine wave: 0.1v.-1500v., 7 ranges. Peak-to-peak: 0-4000v., 7 ranges. Output (db) min. minus 20 db to plus 68 db.

Input Impedance: 1.0 megohms. D.c. Volts: 0.1v.-1500v., in seven ranges. Impedance: 1.0 Megohms.

Resistance: 0.2 ohm to 1000 Megohms, in seven ranges.

The K-142 Vacuum Tube Voltmeter uses a P-90 d.c. 200 microammeter and operates from 240 volt a.c. or 12 volt d.c. Large clearly calibrated meter gives ease of reading.

Price \$64.35 (inc. S. Tax)

### TRANSMISSION LINE EQUIPMENT

Formula III: Low-Loss 300 ohm open wire Transmission Line, 100 ft. long, coiled and boxed. Price \$5.18 (inc. S. Tax).

14 gauge hard-drawn Copper Wire for Amateur Antenna Systems. Any length cut. Price: 8 cents per yard (inc. S. Tax).

Porcelain Egg-type Insulators. Price: \$1.00 (inc. S. Tax).

### GRID DIP OSCILLATORS

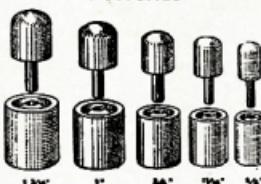
Just out! The transistorised EDDYSTONE "Edmetone" type G.D.O. 390 Kc. to 110 Mc. with built-in power supply and Zener stabilisation maintains constant performance with falling voltage. Can be used as a g.d.o. for resonance checks on tuning circuits, for actual measurement of inductance and capacity. An audio output is provided for use as a signal generator for receiver alignment or as a signal source for audio tests. Can be used as absorption wavemeter, heterodyne wavemeter and modulation monitor. Frequency is selected by a variable drive while the clearly calibrated scale permits rapid reading. Meter sensitivity is adjustable. Unit includes jack for Morse key for use as a Morse code practice oscillator. No external power source required. Price \$84.75 (inc. S. Tax).

WM. WILLIS & CO. PTY. LTD., 430 Elizabeth Street, Melbourne, C.1, Vic. Phone 34-6539

### S.W.R. METERS

KYORITSU Model K-108 Standing Wave Ratio: 1:1 to 1:10 S.W.R. Impedance 50 and 75 ohms. Frequency range 1.5 to 60 Mc. Includes 0-100 d.c. microammeter. \$20 inc. sales tax.

### PUNCHES



### WILLIS HAMMER DIE PUNCHES

WILLIS hammer type die punches are made to precise sizes for use in industry wherever a clean, sharp hole is required to punch down to 14 gauge steel. Centre remnant removed with a flick of the hand. Can be used in die press. Special sizes made to order at slight additional cost.

Size	Price	Size	Price
3/8 in.	\$2.50	1-1/2 in.	\$6.40
7/16 in.	\$2.40	1-5/8 in.	\$6.40
1/2 in.	\$2.60	1-3/4 in.	\$7.20
5/8 in.	\$2.60	1-7/8 in.	\$8.00
11/16 in.	\$3.00	2 in.	\$8.00
1-1/16 in.	\$3.20	2-1/8 in.	\$8.80
13/16 in.	\$3.20	2-1/4 in.	\$8.80
7/8 in.	\$3.80	2-3/16 in.	\$9.60
1 in.	\$3.80	2-1/4 in.	\$9.60
1-1/16 in.	\$4.00	2-5/16 in.	\$10.40
1-3/8 in.	\$4.00	2-3/8 in.	\$10.40
1-3/16 in.	\$5.00	2-1/2 in.	\$11.00
1-1/4 in.	\$5.20	2-3/4 in.	\$12.40
1-5/16 in.	\$5.20	3 in.	\$13.40
1-3/8 in.	\$5.80	3-1/4 in.	\$15.80
1-7/16 in.	\$5.80	3-1/2 in.	\$18.80

Trade Enquiries Invited

### A & R TOROID BALUNS

General Specifications: Power rating—Types A, B, C, 200 watts or 400 watts p.e.p. provided the s.w.r. is 2:1. Construction—Toroidal ferrite cores, fully enclosed with a porous rubber base under vacuum. Suitable for use in cold to sub-tropical areas. All except 353C and 356C are provided with antennas insulator support brackets. Balun dimensions approx. 2 in. diameter x 1 in. plug socket and lug. Weight approx. 3 1/2 to 4 oz.

Type 350A—Impedance ratio 1:1. 75 ohms unbalanced to 75 ohms balanced. 3 to 30 Mc. For use at centre of a dipole antenna with co-axial cable feed line or at base end with 75 ohm twin line. Co-axial connector is Belling & Lee 1664-A and lug terminals. Price \$3.77 (inc. S.T.)

Type 352A/BC—Details as 350A except frequency range 500 Kc. to 5 Mc. or to 30 Mc. for receiving purposes only with increased attenuation. Price \$3.77 (inc. S.T.)

Type 353B—This is a type 350 with a co-axial socket SO-239 (Amphenol screw type). Price \$4.39 (inc. S.T.)

Type 354B—Type 351 with SO-239 co-axial socket. Price \$4.39 (inc. S.T.)

Type 355C—Impedance ratio 2:1:1. 52 ohms unbalanced to 25 ohms unbalanced. 3 to 30 Mc. For use at the base of a mobile whip antenna, coupled to fixed or adjustable transmitter output impedance. Lug terminals. Price \$3.49 (inc. S.T.)

Type 356C—Impedance ratio 2:1:1. 75 ohms unbalanced to 25 ohms unbalanced. 3 to 30 Mc. 1/2 in. terminals. Use as 355C. Price \$3.49 (inc. S.T.)

## FOSTER DYNAMIC MICROPHONES

### SPECIFICATIONS:

Output Impedance ..... 50 ohms or 50K ohms  
Effective output level ..... -55 db. [0 db. — (one) 1V. Microbar]  
Frequency response ..... 50 to 15,000 c.p.s.

### OMNI-DIRECTIONAL DYNAMIC:

Plastic Diaphragm. Swivel fits 5/8" 26 t.p.i. Stands.  
Size: 4 1/2" long, 1 1/4" diameter. Colour: TWO-TONE GREY.  
Cable: 12 ft. of P.V.C.

Retail Price 50K ohms: £4/16/0 + Sales Tax 10/0

Retail Price 50 ohms: £4/14/0 + Sales Tax 9/10

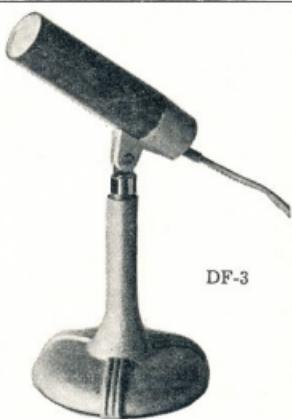
A QUALITY PRODUCT FOR TAPE RECORDERS & P.A. USERS



Marketed by **ZEPHYR PRODUCTS PTY. LTD.**  
70 BATESFORD STREET, CHADSTONE, S.E.10, VIC.

Manufacturers of Radio and Electrical Equipment and Components

Agents: D. K. Northover & Co.; Neil Muller Ltd.; Homecrafts (Tas.) P/L.; Jacoby, Mitchell & Co. P/L.; T. H. Martin P/L.

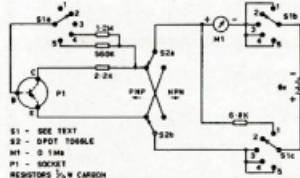


## A SIMPLE TRANSISTOR TESTER

ROY PROWSE,\* VK3XY

The transistor field has made great strides in the last several years and their use has become widespread. The practical application of these devices is increasing in the Ham shack, as is evidenced by the number of Hams who are using transistorised equipment both commercially manufactured and home-built.

The author has been experimenting with various transistor applications for the last few years and were it not for the fact that the junk box—a product of some 30 years' Hamming—holds many tubes and tube circuitry components, transistorised equipment would be used exclusively. However, the pocket-book dictates that the junk box be used wherever possible. When this is not possible then transistors are used and in this regard the cost is much less when compared with tubes and their circuit components. Also, metalwork requirements are considerably less.



## SIMPLE TRANSISTOR TESTER

This experimentation has revealed that the spread of characteristics between transistors of the same type is sometimes quite large, and it quickly became apparent that to achieve the best results only the best of the type to be used should be procured. Also, a method was required for confirming the continuing serviceability of these devices, both PNP and NPN, which had been used again and again in various experimental circuits.

The answer, of course, is a transistor tester, but have you seen the price? Therefore, a tester was required which would provide the answers the author wanted at little cost and the box described is the simplest method the author could find of achieving this requirement, and the instrument has proved invaluable. Readers may be interested in the box which can be built from scratch for a few dollars, the only item which could be considered as expensive being the meter. The box will, of course, not read all required parameters but for a simple "go-no-go" device it has been found to be all that is required.

Incidentally, use of the box in a dealer's premises has produced many looks of amazement but the desired result has been achieved in that some transistors for which the dealer wanted good money were not acceptable to

the author. Only the best of the particular type wanted were taken and it can only be presumed that those that were not acceptable were sold to other experimenters and placed into use with not always the desired results being achieved.

The circuit and physical make-up of the tester is shown in the accompanying diagram and photograph. The box used is the familiar BC1366 from disposal sources and which was referred to in a previous article by the author. All components in the box are removed and the only item which is re-used is the switch which is re-located, and re-wired as shown. The other items used are shown in the parts list.

Study of the circuit diagram will show that S2 selects the correct applied voltage polarity for either PNP or NPN type transistors, and that S1 has five positions. For those who do not know the BC1366, position No. 1 of this switch is a spring-loaded position from No. 2 position, and the switch must be physically held in No. 1 position to register. This position is used to test the battery voltage by placing the 6.8K resistor in series with the meter and the battery. It is not essential of course that this type switch be used—any 3-pole, 5-position switch will do.

course will also be subject to temperature effects, particularly with germanium types.

Positions Nos. 4 and 5 read respectively up to a maximum  $H_{re}$  of 200 and 100. For example, on the X200 range position a reading of 0.4 mA. equals a d.c. beta of 80.

If this article stimulates your interest in transistors, then one of the aims of the author has been achieved. There are many bargains available in the transistor field and this tester will allow you to make a reliable selection of the good from the not so good, and more important still, to reject the bad, of which there are many about. A little experimenting with these devices and, like the author, you will say goodbye to tubes, pocket-book permitting. The safety factor alone warrants their use—think of the low operating voltages involved. No need to keep one hand in the pocket in the time-honoured way, which is not always successful.

#### Technical Correspondence—

## "THE MODE OF POWER"

Editor "A.R." Dear Sir-

On page 3 of the October issue of "A.R." appears an article on a 240v. a.c. power supply by B. A. White, VK5VR.

In the last paragraph he credits me with "the mode of power".

I would be pleased if, in a subsequent issue, you would correct this statement. It is true that Barry VK5YB saw the power plant which I made up and have been operating successfully for very many years. However, I myself gained the information from an article published in the June 1958 issue of the American publication "CO" and which was loaned to me by Wally Green, VK6WG.

The article in "CQ" also contained additional information and circuits of alternative methods of excitation which might be of interest to other readers. Unfortunately I have no complete copy of the article. However, knowing that there is another published article could be of some assistance to those who desire to go further into the matter.

I would add that the control box containing the condensers and switch can be located at the load or operator's end of circuit. This is a decided advantage since the power unit can be placed at a distance from the operator, so reducing the exhaust noise of the prime mover. The scheme's biggest advantage appears to be that, apart from the ignition noise from the spark plug (and which is as easily suppressed), it is electrically noise free.

—Rolo Everingham, VK6BO

#### AMATEUR FREQUENCIES:

#### USE THEM OR LOSE THEM!



WARBURTON  
FRANKI

# XMAS BARGAINS

## TRANSISTOR TRANSFORMERS

ROLA LDR 43: 4300/600 ohms c.t.

**25c each** + 25% S.T. plus pack and post 5c.

A & R TO9 and TD5: Set of output and driver transformers. Impedance: TO9—375 c.t./3.5 ohms; TD5—3000/1300 ohms c.t.

**75c pair** + 25% S.T. plus pack and post 5c.

## POWER TRANSFORMERS

A & R Type 51113: 250 volts a side at 80 mA. and 6.3 volts at 4 amp.

**\$1.50** + 25% S.T. plus pack and post 25c.

A & R Type 2005: 180 volts a side at 40 mA. and 12.6 volts at 1 amp.

**\$1.00** + 25% S.T. plus pack and post 20c.

## SPEAKER TRANSFORMERS

A & R Type 2655: Size E, 5000-33 ohms.

**50c** + 25% S.T. plus pack and post 5c.

## TRANSCEIVERS

Three transistors, range up to  $\frac{1}{2}$  mile, depending on terrain. Supplied complete ready to use with telescopic antenna and batteries.

**\$17.35** set of 2 + 12½% S.T. Also 5 transistor model

**\$23.50** set of 2 + 12½% S.T. And 9 transistor model

**\$53.85** set of 2 + 12½% S.T.

## FILAMENT TRANSFORMERS

Double wound. 15 volts at 500 mA.

**75c** + 25% S.T. plus pack and post 10c.

## RECTIFIERS

Bridge type. Contact cooled. Up to 20 volts at 1.5 amp.

**95c** + 12½% S.T. plus pack and post 5c.

## SILICON DIODES

IN3491: 18 amps. at 50 p.i.v. Available with either K or A to case, 75c plus S.T. 12½%.

Heat Sink Adaptors to suit, 25c plus S.T. 12½%.

**S10AR2**: 1 amp. at 1,000 p.i.v. .... **\$1.20** plus S.T. 12½%.

**S15AR2**: 1 amp. at 1,500 p.i.v. .... **\$2.00** " " "

**IN3193**: 750 mA. at 200 p.i.v. .... **40c** " " "

**IN3194**: 750 mA. at 400 p.i.v. .... **55c** " " "

**IN3195**: 750 mA. at 600 p.i.v. .... **75c** " " "

## LOUDSPEAKERS 4"

Available in 3.5, 8 or 15 ohms impedance.

**\$1.50** + 25% S.T.

## DIAL LAMPS

6-8 volts, M.E.S. tubular. Box of 10—

**35c** + 25% S.T. plus pack and post 5c.

## BELPHONE INTERCOMM. SYSTEMS

Comprises two Handsets (similar P.M.G. telephone) and connecting wire. Very clear reproduction. Loud bell to call.

**\$8.65 set** (inc. batteries) + 12½% S.T.

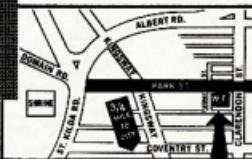


WARBURTON FRANKI

220 PARK ST. SOUTH MELB., VIC.

PHONE  
30 lines

69-0151



OPEN SAT.  
MORNING

•  
Please include  
postage or  
freight with  
all orders

# Transceiver Power Supplies

Editor "A.R." Dear Sir,

The comments of Phil VK5NN and Lee VK7RG in "A.R." for July and September are very much to the point.

Many Amateurs long to own a piece of American-made equipment and will refuse to buy a locally made product. In some cases this is justified because the Australian maker may have failed to supply a reliable product, however, this aversion to the local product is often unjustified and many local manufacturers have demonstrated their ability to design and construct high quality equipment.

We must not lose sight of the fact that there are, in fact, three markets in Australia. Firstly, there is the "consumer product" market—Radio, T.V., etc. Then follows the "professional or capital equipment" market—this requires an entirely different design approach to cater for the much higher reliability required by people who depend upon these devices to provide saleable services. Professional engineers usually make the purchasing decisions and equipment is installed and maintained by qualified engineers and technicians. The third is the "military market." Here the demand is for very reliable equipment capable of operation under the most arduous conditions.

As the demands made upon the equipment increase, so the cost rises. It may also rise because the quantity required is quite small.

Australian Amateurs, as a class, have become used to using equipment made mostly for the military market demand somewhere between the consumer product and the professional equipment market. Equipment must be inexpensive and reasonably reliable, but no service of vital importance will fail if the equipment does not work and so the "over-running" of certain components such as final tubes is justified.

Many years in the electronic field leads me to believe that at least one area where the Australian product is definitely superior is power supplies. The main reason for this is that supplies made in Australian factories are designed for operation from 240 or 250 volts c.p.s. a.c. and not 110/220 or even 117/234. American supplies are usually designed for 117v. 60 c.p.s. and will in many instances run hot on 50 c.p.s.

My criticism in the case of transceiver supplies is not that they run hot, but that they supply voltages which are considerably in excess of the absolute maxima listed by the tube makers in equipment where the tubes are already being run beyond their normal limits. The National NCX-A power supply is rated to supply 700v. d.c. at 300 mA., 280v. d.c. at 200 mA., plus bias and filament voltages. It performs satisfactorily without overheating and will handle an a.c. input of plus or minus 10% without distress. The dynamic regulation is quoted as 2%. But what of the equipment voltages under these conditions of high line voltage?

To me the frightening thing about these measurements is that the voltages exceed the tube manufacturers' ratings long before the equipment makers' tolerances are exceeded. Even under conditions of maximum voltage the power supply continued to run "cool" after a considerable period of operation.

A number of Amateurs using equipment of similar type, but not necessarily of the same make, have reported that the final tubes became gassy after a short period of operation. When one considers that many of the tubes used by U.S. manufacturers in their s.s.b. equipment are not readily obtainable in Australia and may cost up to about \$8 or \$10 per pair (with tax), it can be seen that there is a strong argument for a type of operation that will permit the final tubes to give of their best for longer periods. Remember that if your final voltage is 800v. and

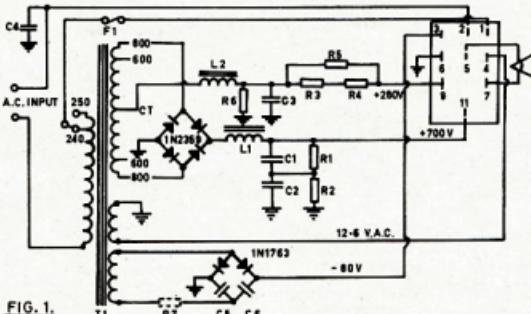


FIG. 1.

C1, C2—30  $\mu$ F, 450v. w/kg.  
C3—40  $\mu$ F, 450v. w/kg.  
C4—0.01  $\mu$ F, 600v. w/kg. D.C.W.  
C5, C6—20  $\mu$ F, 150v.  
R1, R2—4  $\times$  7.5 k ohms 10w. w.w. in series.  
\*R3, \*R4—33 k ohms 10w. w.w.  
R5—660 ohms 10w. w.w.

R6—30k ohms 10w.  
\*R7—To be decided on test (50-500 ohms).  
T1—800/600v. c.t. 300 mA., 38v. 10 mA. (doubler), 12.6v. a.c.  
L1—12-1/2 Hy., 25/300 mA., 60 ohms d.c. Res.  
L2—2H. 200 mA., 44 ohms d.c. Res.

they idle at 50 mA. (2 x 6JB6's or similar), the plate dissipation is 40 watts.

Because of this feature of the use of American supplies, it has been decided to design Australian-made supplies which will meet the requirements of such transceivers and permit operation at the full rated 200w. (p.e.p.) input or a lower figure of about 120 watts, by simply changing secondary taps.

Australian Amateurs can purchase basic kits consisting of a transformer and two chokes for a modest sum and complete power supplies are available at prices which are about half that of an imported supply. The transformers are provided with primary taps at 240 and 250 volts to cater for the line conditions usually encountered in Australia.

S. T. Clark, VK3ASC.

## AMATEUR FREQUENCIES:

ONLY THE STRONG GO ON—  
SO SHOULD A LOT MORE  
AMATEURS!

Table 1.

# SINGLE SIDEBAND-POWER MEASUREMENTS

Following the discussions carried on over the past year with the Postmaster-General's Department on the subject of single sideband power levels and methods of measurement, Federal Executive of the W.I.A. have received the following letter from the Department. It sets out quite clearly the allowable power and acceptable method of measurement, both of which are fully endorsed by the Institute.

The concept of listing acceptable commercial equipment is an extremely practical one and should be of assistance to all concerned. This first list does not presume to be exhaustive and suggestions from all Amateurs for additions to it would be welcomed.

Such suggestions should be sent to the Federal Secretary, W.I.A. (P.O. Box 2611W, Melbourne, Victoria), and not to the Department. Inclusion of photostat copies of the maker's specifications and recommended operating conditions will be of great assistance in negotiating approval.

Additions to the list of approved equipment will appear in "A.R." as and when such approval is obtained.

—H. L. Hepburn,  
Federal Vice-President,  
W.I.A.

Federal Secretary, W.I.A.,

Dear Sir,

As discussed previously in connection with the use of single sideband equipment, forwarded herewith is a list of equipment types which the Department is prepared to accept as meeting the 400 watt, p.e.p. power output limitation when operated in accordance with the maker's specification.

B. & W.:  
6100

Central Electronics:  
\*200V  
\*10A  
\*600L

Collins Radio:  
\*32S1  
\*32S3  
KWM1  
\*KWM2

R. L. Drake and Co.:  
\*TR4  
TX4  
\*TR3

Dynalab Co.:  
HW12  
HW22  
HW32

E.I. Co.:  
757  
\*753

Hallcrafters:  
HT46  
SR150  
SR160  
\*HT44  
\*SR500  
\*HT32B  
\*HT37

## Hammarlund:

HX500  
\*HX50  
\*HX50A

## Heathkit:

SB110  
\*HW12  
\*SB100  
\*SB400

## E. F. Johnson:

Viking 200  
Valiant 500  
Courier  
Invader

## Lafayette:

HA250 (linear amplifier)

## National:

NCX3  
NCX5

## R.F. Communications:

RF301

## Swan Electronics:

120  
\*250  
\*400

## Transcon Electronics:

SBT-3

## KW Electronics:

\*KW600L  
KW2000  
KW2000A

## World Radio Laboratories:

Duobander 84  
\*Galaxy III.  
\*Galaxy V.

## Yaesu Muren:

FL100  
FL200  
\*FL1000

\* This equipment must be modified in such manner as to preclude operation with input power in excess of 150 watts to the final transmitter stage when employed for type A1 emission.

In those cases where it becomes necessary to make a measurement of the peak envelope power, the following method shall be employed.

Apply two non-harmonically related sinusoidal tones of equal amplitude to the single sideband transmitter which is operating into a matching resistive dummy load and an appropriate r.f. current meter. With an oscilloscope connected across this load, the transmitter with the carrier fully suppressed is adjusted for maximum power output coinciding with linear operation as indicated visually on the oscilloscope.

The power output is then calculated by the formula:—

$$P_m = I^2 R$$

where  $P_m$  = mean power in watts.

$I$  = r.f. current in amps. flowing

$R$  = resistance of the dummy load in ohms.

The resultant figure, being mean power, is doubled to give peak envelope power and this value must not exceed 400 watts.

Your comments on the above measuring method and advice of other types of equipment which might meet requirements would be appreciated in due course, please.

Yours faithfully,  
C. M. Carroll,  
for Director-General.  
☆

## CONTEST CALENDAR

10th Dec. to 15th Jan.—Ross A. Hull Memorial Trophy V.h.f. Contest.  
4th/5th Feb.—33rd A.R.R.L. International DX Competition (phone).  
11th/12th Feb.—John Moyle Memorial National Field Day Contest.  
18th/19th Feb.—33rd A.R.R.L. International DX Competition (c.w.).  
4th/19th Feb.—A.R.R.L. Novice Round-up.

## WIRELESS INSTITUTE OF AUSTRALIA FEDERAL EXECUTIVE

The Institute can now offer annual subscriptions to the following Amateur Journals:

★ "QST"—Associate membership and renewals, \$5.40.

★ R.S.G.B.—"The Bulletin" is only sent with membership of the Society. Send for application form and FREE sample copy of the R.S.G.B. "Bulletin," \$5.95.

★ "CQ" Magazine, \$5.20.

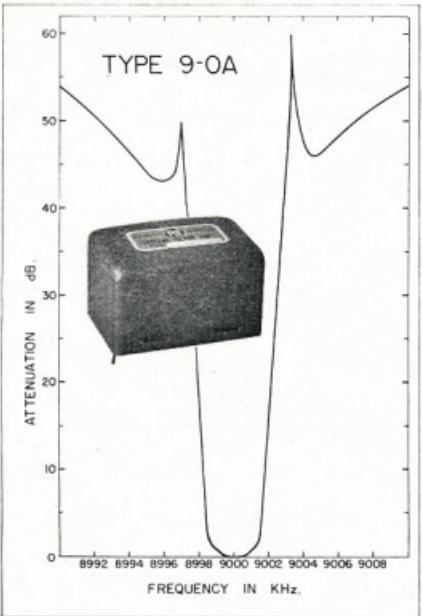
★ "73" Magazine, \$3.50.

R.S.G.B. Publications and A.R.R.L. Publications available.

Send remittance to Federal Executive, C/o. Box 36, G.P.O., East Melbourne, C.2, Vic.



CRYSTAL  DIVISION



NEW! — DESIGNED AND PRODUCED  
IN AUSTRALIA

## Pye 9 Mc. Crystal Filter Unit

### TYPE 9-0A FOR S.S.B. TRANSMITTERS

To satisfy an ever-increasing demand for a filter suitable for s.s.b. transmitting purposes, Pye engineers have developed the Type 9-0A which is now in production at our Crystal Division.

This filter, supplied with two Style "D" carrier frequency crystals and sockets, comprises a package unit. With each unit a typical schematic circuit diagram is supplied.

**Specifications:** 6.0 dB Bandwidth: 3 Kc. min.  
40 dB Bandwidth: 6 Kc. max.  
Pass Band Ripple: 2 dB max.  
Insertion Loss: 4.5 dB.  
Input Termination: 150 ohms plus 150 pF.  
Output Termination: 150 ohms plus 120 pF.  
Physical Dimensions: 2" x 1.375" x 1.125".

Recommended Oscillator Crystals: 8998.0, 9002.0 Kc.

**Price each package unit — \$30.00 plus tax**

Quantity discounts will be negotiated.

## Close Tolerance Gold Plated Crystals for Amateur Applications

		Amateur Net (each includ. Tax)
★ 1.8 Mc. to 14.999 Mc.	± 0.005%.	In Style "D" Holders, $\frac{1}{2}$ " pin spacing <b>\$4.85</b>
★ 15.0 Mc. to 47.999 Mc.	± 0.005%.	In Style "D" Holders, $\frac{1}{2}$ " pin spacing <b>\$5.05</b>
★ 48.0 Mc. to 61.0 Mc.	± 0.005%.	In Style "D" Holders, $\frac{1}{2}$ " pin spacing <b>\$5.65</b>
★ 100.0 Kc.	± 0.005%.	In Style HC13/U Holders, $\frac{1}{2}$ " pin spacing <b>\$9.00</b>
★ 1.0 Mc.	± 0.005%.	In Style "D" Holders, $\frac{1}{2}$ " pin spacing <b>\$9.00</b>

Many other types and tolerances are available from our standard production.

Please consult us on your Crystal requirements.

## PYE PTY. LTD.

MELBOURNE:	P.O. BOX 105, CLAYTON	Phone 544-0361
BRISBANE:	97 MERIVALE ST., SOUTH BRISBANE	," 4-1571
SYDNEY:	59 ARUNDEL ST., FOREST LODGE	," 68-4111
ADELAIDE:	1 IFOULD STREET, ADELAIDE	," 23-3979
PERTH:	151-155 BRISBANE STREET, PERTH	," 28-4338
HOBART:	141 MURRAY STREET, HOBART	," 3-3707

# SIDE BAND

Sub-Editor: PHIL WILLIAMS, VK1NN

Main observations on the single sideband front this month have been the extensive use of this mode during the week-end of the "CO" World-Wide DX Contest—phone section, and the Boy Scouts' Jamboree-on-the-Air, both of which happened to fall together. The organisers of both of these had better get together and arrange different week-ends in future, as I heard so many people say that they would have liked to have been in both, but, of course, a prior arrangement with the Scouts precluded participation in the DX Contest.

The Jamboree is now a well established feature of the Scout calendar throughout the world, and the number of sideband transceivers operating in Scout Halls, with antenna systems erected by the boys was commendable. These small transceivers lend themselves to this type of portable operation very readily. A pleasing feature this year was the large participation by Girl Guides. There appeared to be many more groups of girls on the air this year, and they were very good operators, too.

Since the Jamboree I have had numerous enquiries from Scouts regarding the methods of studying for the exam and obtaining a licence, and these lads will certainly make good Amateurs.

## NETTING WITH TRANSCEIVERS

One hears many discussions on the air (and complaints) regarding netting and tuning up, especially the problems encountered with transceivers. The following points should be remembered and scrupulously observed:

- Tune the station in carefully until you consider that the voice sounds natural—not just intelligible.
- After you have netted as well as possible, do not proceed to tune up the transmitter on the net frequency before you call.

It has been established that a male voice is intelligible with carrier insertion anywhere between minus 200 and plus 500 cycles per second from the correct frequency required for natural voice reproduction. While writing this I am listening to two VK3 stations, both using transceivers, using break-in with vox control, and about 200 c.p.s. apart. To me, one sounds quite natural and the other rather higher pitched, but both are perfectly intelligible. However, if I make the latter station sound normal—and I know his normal speaking voice, then the first station sounds anything but normal—quite gassy, in fact.

I can only wonder whether my friend's transceiver oscillators are changing frequency between transmit and receive modes—this is possible—or whether he is just not very fussy about

tuning in. This oscillator frequency changing can sometimes occur with very strong signals actuating the a.g.c., and it is a good plan to check the oscillators, both crystal and v.f. types, on a separate receiver, if you are constantly receiving complaints about your netting and your procedures are apparently correct in other respects.

And now, on the subject of tuning up your transmitter or transceiver on a net frequency. I can only ask that you move to a clear spot on the dial to tune up, or preferably, and as stated in the Handbook for the Guidance—using a dummy aerial, the most satisfactory of which is a large non-inductive resistor. Many of the antenna tuners, "match boxes," or whatever they may be called, have a 50 ohm load built into them and this makes the job very simple.

Some transmitters and transceivers use an audio oscillator to provide a signal into the audio amplifier on

## BAD SIDEBOARD SIGNALS

Yes, there are plenty of them, and you'll hear more of them around as more stations come on. The causes are numerous, but I shall list some of the common causes here, in the hope that it may help the unfortunate sidebander who gets the thumbs down sign from his fellow Amateurs.

"Audio gain too high" is the commonest complaint of all, especially for the newcomer to sideband, who is anxious to get amongst the DX and does not watch either the meters or his enthusiasm, when working the weak, rare ones. The tendency to climb into the mike should be watched, and a "weather-eye" kept on the plate meter or output meter at all times. These should kick up to about half of the peak c.w. readings on test, when you speak. The handbooks usually tell you all about this and owners of commercial gear should read them carefully. The monitor oscilloscope is a very good monitor, and invaluable in detecting flat-topping whatever the cause.

Incorrect loading of the transmitter is another frequent cause of broad distorting signals and even those exciters with variable loading controls should normally be adjusted using an s.w.r. meter followed by an aerial tuner. The improvements are quite amazing where

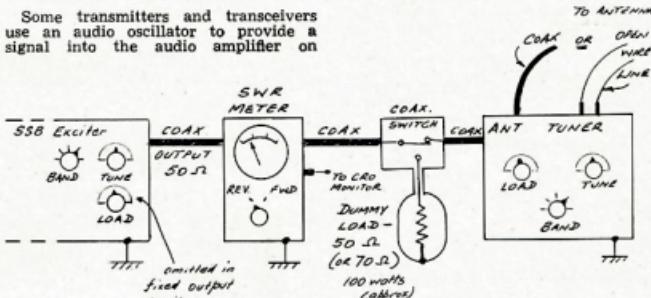


Fig. 1.—Set-up to give correct loading impedance to an s.s.b. exciter (or amplifier).

transceiver. This system of tuning up is quite good, but we must warn operators that, for example, the 1000 c.p.s. audio tone, if put on top of another net, can cause complete dislocation of the net and I sometimes wonder at the tolerance of net operators when they welcome (?) a new operator into the net after he has just tuned up for half a minute "bang" on top of the net stations.

I can only say, that if you do not possess a dummy load, then please move to a clear channel, or park on top of another source of noise (there are some infernal machines left running in the Amateur bands, and you can tell from the sound of them just what they are or are not doing) in order to get your tuning done. This subject is treated at some length, because I am quite sure some operators think they are putting out a "carrier" frequency, zero-beating with other (absent) carriers on the net, and therefore causing no interference.

the aerial s.w.r. is high, as even if proper matching is possible, the resulting low or high Q of the output circuit may cause some queer results. The aerial tuner, Z-match, match box, a.c.u.—call it what you like—will make sure your final is presented with its correct load on the pi output tuned circuit. Linear amplifiers must be correctly loaded, otherwise spurious emissions may occur, even including parasitic oscillations at near output frequency. Sudden troubles with previously tame installations often result from broken aerials or feeders, for which the remedies are obvious. The s.w.r. meter will show up troubles of this sort very quickly.

Parasitic oscillations are diabolical things to cure, and I can only suggest that you be sure to include all the suppressors and chokes when you build and make provision for neutralising all class AB1 or AB2 linear amplifiers. You may operate on 80 and 40 without  
(Continued on Page 10)

## SIDEBAND

(Continued from Page 9)

neutralisation, but not on 15 and 10 metres.

R.F. getting into the audio is another common cause of bad signals. This occurs with improperly shielded and filtered microphones and cables, especially where linear amplifiers are in use, and an older crystal microphone is retained in use. Keep the r.f. in boxes and low impedance co-axial cables, properly matched, in the shack, ground all of the equipment, and make sure the mike and its cables are well screened. Early audio stages must be screened and grids by-passed for r.f., and it is worth pointing out that these measures are better carried out while building than having to add them afterwards.

Again I would add, that if you receive a bad report, just accept it in the spirit in which it is given and get the fault repaired, using a dummy load on the transmitter for testing. The oscilloscope and station receiver may be very useful for tracking down such faults.

As a final word of warning—please keep the covers on the linear tube compartment so that you will not kill yourself on the e.h.t. supply to the final plates. A 6146 will stand 800 volts, but the operator probably will not!

Next time I have a few notes on input circuits for grounded-grid amplifier stages. 73, Phil VK5NN.

## PRINTED CIRCUITS AID AUSTRALIAN INDUSTRY!

Applications for printed circuits from Precision Windings in industry are growing daily . . . it's simply amazing how many leading electronic and design engineers specify "Precision Windings" boards. PW's photographic process **does** have many advantages . . . small numbers may be manufactured economically . . . definition and detail are crisp and clear . . . negatives are readily available for alterations . . . and tarnishing is prevented by a protective over-coating. Above all the PW process offers quality control at every stage of manufacture. This is why more and more industrial organisations are coming to Precision Windings for up to the minute technical advice and prompt, dependable deliveries.

### AND FOR THE HOBBYIST?

Don't worry . . . we're not neglecting our many friends who want a single circuit board. Send us your full folder on "How to prepare artwork" and for our price list. It matters little if you want one or a thousand boards . . . PW's price is the same. Many of the latest "Australian" designs are kept in stock and delivery is immediate. Special printed circuits are normally despatched within 7 days of receipt of your artwork. Artwork aids in the form of Solder Paste, Black Crepe Tape, Clear Film and Transfer Letters are also available from Precision Windings at low cost. Write now!



52 Cambro Road, Clayton, Vic.  
Phone 544-7370

## W.I.A. DX.C.C.

Listed below are the highest twelve members in each section. Position in the list is determined by the first number shown. The first number represents the participant's total countries less any credits given for deleted countries. The second number represents the total DX.C.C.C. credits given, including deleted countries. Where totals are the same, listings will be alphabetical by call sign.

Credit for new members and those whose totals have been amended are also shown.

### PHONE

VK3AHO	310/322	VK4HR	261/277
VK3BZ	309/320	VK2KZ	259/265
VK3BZ	309/314	VK3ZT	241/245
VK3MK	298/315	VK3ADE	233/237
VK6KR	296/319	VK2AAK	231/235
VK4FJ	273/290	VK2APK	217/230

New Members:	
VK5GX	101/101
VK4PX	106/109

Amendments:	
VK3SM	117/119

VK2AGH	100/118
--------	---------

### C.W.

VK5KB	317/340	VK2AGH	276/289
VK3ADE	297/312	VK3ZT	276/289
VK3CK	291/312	VK3NC	280/280
VK3QI	288/308	VK3ARX	261/261
VK4FJ	236/308	VK6RU	251/272
VK2VN	279/300	VK3XB	248/261

Amendments:	
VK3YI	239/250

VK3KS	203/204
-------	---------

### OPEN

VK3ADE	305/320	VK4HR	279/301
VK2AGH	297/312	VK2ACX	276/289
VK6RU	301/324	VK3ARX	270/278
VK6MK	300/317	VK3NC	267/287
VK4FJ	292/314	VK3JA	265/283
VK2VN	285/300	VK3TL	260/264

New Member:	
VK4CK	103/104

Amendments:	
VK2SG	161/165

VK4PX	143/148
-------	---------

## BRIGHT STAR CRYSTALS

FOR ACCURACY, STABILITY, ACTIVITY AND OUTPUT



Our Crystals cover all types and frequencies in common use and include overtone, plated and vacuum mounted. Holders include the following:

DC11, FT243, HC-6U, CRA, B7G, Octal, HC-18U;

THE FOLLOWING FISHING-BOAT FREQUENCIES ARE AVAILABLE IN FT243 HOLDERS:

6280, 4095, 4535, 2760, 2524 Kc.

5,500 Kc. T.V. Sweep Generator Crystals, \$7.25;  
100 Kc. and 1000 Kc. Frequency Standard, \$17;  
plus Sales Tax.

Immediate delivery on all above types.

AUDIO AND ULTRASONIC CRYSTALS—Prices on application.  
455 Kc. Filter Crystals, vacuum mounted, \$13 each plus Sales Tax.

ALSO AMATEUR TYPE CRYSTALS—3.5 AND 7 Mc. BAND.

Commercial—0.02% \$7.25, 0.01% \$7.55, plus Sales Tax.

Amateur—from \$6 each, plus Sales Tax.

Regrinds—Amateur \$3, Commercial £3.75.

CRYSTALS FOR TAXI AND BUSH FIRE SETS ALSO AVAILABLE.

We would be happy to advise and quote you.

New Zealand Representatives: Messrs. Carrel & Carell, Box 2102, Auckland.  
Contractors to Federal and State Government Departments.

## BRIGHT STAR RADIO

LOT 6, EILEEN ROAD, CLAYTON, VIC.

Phone 546-5076

With the co-operation of our overseas associates our crystal manufacturing methods are the latest.



# JOHN MOYLE MEMORIAL NATIONAL FIELD DAY CONTEST, 1967

SATURDAY, 11th FEB., 0800 G.M.T., TO SUNDAY, 12th FEB., 0800 G.M.T., 1967

The Federal Contest Committee of the Wireless Institute of Australia invites all Australian Amateur and Short Wave Listeners to participate in this Annual Contest, which is held to perpetuate the memory of John Moyle, whose efforts advanced the Amateur Radio Service.

There are two divisions of this Contest, one of 24 hours continuous duration, and one of 6 hours continuous duration. The six-hour period has been included to encourage the operator who is unable to participate for the full 24-hour period.

Operators using 25 watts or less input to the final stage will be considered for a certificate where his activity warrants its issue.

## DATE

From 0800 G.M.T., 11th February, to 0800 G.M.T., 12th February, 1967.

## OBJECTS

The operators of Portable and Mobile Stations within all VK Call Areas will endeavour to contact other Portable/Mobile and Fixed Stations in Australia and Overseas Call Areas.

## RULES

1. There are two divisions, one of six (6) hours, and one of twenty-four (24) hours duration. The six-hour period for operating may be chosen from any time during the Contest, but the six-hour period so chosen must be continuous. In each division, there are six sections:-

- (a) Portable/Mobile Transmitting, Phone.
- (b) Portable/Mobile Transmitting, C.W.
- (c) Portable/Mobile Transmitting, Open.
- (d) Portable/Mobile Transmitting, Multiple Operation, open only.
- (e) Fixed Transmitting Stations working Portable/Mobile Stations, open only.
- (f) Reception of Portable/Mobile Stations.

2. All Australian Amateurs are encouraged to take part. Operators will be limited to their licensed power. This power shall be derived from a self-contained and fully portable source.

(a) Portable/Mobile Stations shall not be situated in any occupied dwelling or building. Portable/Mobile Stations may be moved from place to place during the Contest.

No apparatus shall be set up on the site earlier than 24 hours prior to the Contest.

All Amateur bands may be used, but no cross band operating is permitted. Cross mode operation is permitted.

Entrants in Section (d) for Multiple Operator Stations can set up separate transmitters to work on different bands at the same time. All such units of a Multiple Operator Station must be located within an area that can be encompassed by a circle not greater than half a mile diameter.

For each transmitter of a Multiple Operator Station a separate log shall be kept with serial numbers starting from 001, and increasing by one for each successive contact. All logs of a Multiple Operator Station shall be submitted by the operator under whose Call Sign the transmitters are working. No two transmitters of a Multiple Operator Station are permitted to operate on the same band at any time.

3. Amateurs may enter for any section.

4. One contact per station for phone to phone, also one for c.w. to c.w. per band is permitted. Cross mode operation will be accepted for scoring.

5. Entrants must operate within the terms of their licences and in particular observe the regulations with regards to portable operation.

6. Serial numbers consisting of RS or RST report plus three figures commencing with 001 and increasing by one for each successive contact shall be exchanged.

## Scoring—

### (a) Portable/Mobile Stations:

For contacts with Portable/Mobile Stations outside entrant's Call Area ..... 15 points

For contacts with Portable/Mobile Stations within entrant's Call Area ..... 10 points

For contacts with Fixed Stations outside the entrant's Call Area ..... 5 points

For contacts with Fixed Stations within the entrant's Call Area ..... 2 points

### (b) Fixed Stations:

For contacts with Portable/Mobile Stations outside entrant's Call Area ..... 15 points

For contacts with Portable/Mobile Stations within entrant's Call Area ..... 10 points

8. The following shall constitute Call Areas: VK1, VK2, VK3, VK4, VK5, VK6, VK7, VK8, VK9 and VK0.

9. All logs shall be set out under the following headings: Date/Time (G.M.T.), Band, Emission, Call Sign, RST/No., Sent, RST/No. Received, Points Claimed. Contacts must be listed in numerical order.

In addition, there shall be a front sheet showing the following information:-

Name ..... Address .....

Call Sign ..... Section .....

Division ..... (6-hour or 24-hour)

Points Claimed .....

Call Sign of other op./s (if any) .....

Location of Portable/Mobile Station .....

From ..... hours to ..... hours

A brief description of equipment used, and points claimed, followed by the declaration:

"I hereby certify that I have operated in accordance with the rules and spirit of the Contest."

Signed ..... Date .....

10. The right is reserved to disqualify any entrant who, during the Contest, has not observed the Regulations and the Rules of this Contest, or who has consistently departed from the accepted code of operating ethics.

11. The decision of the Federal Contest Manager of the Wireless Institute of Australia is final and no disputes will be entered into.

12. Certificates will be awarded to the highest scorer of each section of each division. Additional certificates may be issued at the discretion of the F.C.C. The six-hour certificates cannot be won by a 24-hour entrant.

## 13. Return of Logs:

All entries must be postmarked not later than 28th February, 1967, and be clearly marked "John Moyle Memorial National Field Day Contest, 1967," and addressed to:-

Federal Contest Manager, W.I.A.,  
55 Moulden Ave., Mt. Yokine,  
Western Australia.

## RECEIVING SECTION

14. This section is open to all Short Wave Listeners in VK Call Areas. The Rules shall be the same as for the Transmitting Stations, but may omit the serial numbers received.

Logs must show the Call Sign of the Station heard, the serial number sent by it, and the Call Sign of the Station being worked.

Scoring will be on the same basis as for Transmitting Stations. It will not be sufficient to log a station calling CQ. A station may be logged once only for phone and once for c.w. in each band.

Awards: Certificates will be awarded for the highest scorer in each Call Area.

# LOW DRIFT CRYSTALS

FOR  
AMATEUR  
BANDS

ACCURACY 0.01% OF  
STATED FREQUENCY

3.5 and 7 Mc.

Unmounted, £2/10/0  
Mounted, £3/0/0

12.5 and 14 Mc.  
Fundamental Crystals,  
"Low Drift"  
Mounted only, £5.

THESE PRICES DO NOT  
INCLUDE SALES TAX

Spot Frequency Crystals  
Prices on Application.

Regrinds ..... £1/10/0

**MAXWELL HOWDEN**

15 CLAREMONT CRES.,  
CANTERBURY, E.7,  
VICTORIA

## LOG BOOK

IS NOW AVAILABLE

Larger, spiral-bound pages  
with more writing space.

Price 7/6 each  
including Postage

Obtainable from your Divisional  
Secretary, or W.I.A., P.O. Box 36,  
East Melbourne, C.2, Victoria.

★ <b>GALAXY V. All-Band S.s.b. Transceiver</b> , u.s.b./l.s.b. switching, xtal calibrator, with heavy duty 240v. a.c. supply/speaker unit in matching cabinet	\$650
★ <b>SWAN SW350 Transceiver</b> , same features as the Galaxy V.	\$650
★ <b>GALAXY Duo-Bander 84</b> , 40/80 mx S.s.b. Transceiver, 300w. plus	\$225
★ <b>Hy-Gain TH3JR</b> , 10-15-20 mx 3-element Beam	\$100
★ <b>Hy-Gain TH6DX</b> , 10-15-20 mx 6-element Beam	\$200
★ <b>Hy-Gain 14AVQ</b> , 10-15-20-40 mx Vertical, coax-fed	\$50
★ <b>Hy-Gain 18AVQ</b> , same as 14AVQ with 80 mx coverage added	\$75
★ <b>Webster Bandspanner</b> , all-band mobile centre-loaded Whip, with bumper or body mounting	\$75
★ <b>D.e.-D.c. Mobile Power Supplies</b> for Galaxies and Swans	\$100 and \$120
★ <b>Alliance U88</b> and CDR TR44 and Ham-M <b>Antenna Rotators</b> , with 230v. a.c. indicators-control units	\$55 to \$180
★ <b>Type Swan SW350 Vernier Dial Movement assembly</b>	\$3
★ <b>50 pF. Air-Trimmer Condensers</b> , with extension shafts	\$1
★ <b>9 Mc. German Crystal Filters</b> , with carrier crystals	\$25
★ <b>5180 to 5325 Kc. Crystal Filters</b> , octal plug-in, with carrier crystals	\$15
★ <b>Used Eddystone 888A</b> 160-10 mx bandspread Receiver	\$225
★ <b>Used Wagner 1A</b> all-band s.s.b. Transceiver, with Wagner a.c. supply and speaker unit	\$350

All prices are net, cash with order.

## SIDEBAND ELECTRONICS ENGINEERING

P.O. BOX 23, SPRINGWOOD, N.S.W.

Telephone Springwood 51-1384, part of the Penrith telephone exchange area,  
not a Sydney exchange number!

## For Reliable Connections

**OTL**



**RESIN CORE SOLDERS**

**O. T. LEMPRIERE & CO. LIMITED**

Head Office: 27-41 Bowden Street, Alexandria, N.S.W.  
and at Melbourne • Brisbane • Adelaide • Perth.

OTL/78

## DURALUMIN, ALUMINIUM ALLOY TUBING

IDEAL FOR BEAM AERIALS AND T.V.

★ **LIGHT**      ★ **STRONG**      ★ **NON-CORROSIVE**  
STOCKS NOW AVAILABLE FOR IMMEDIATE DELIVERY

**ALL DIAMETERS -  $\frac{1}{4}$ " TO 3"**

Price List on Request

STOCKISTS OF SHEETS—ALL SIZES AND GAUGES

## GUNNERSEN ALLEN METALS PTY. LTD.

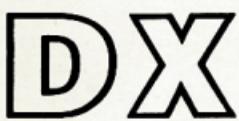
SALMON STREET,  
PORT MELBOURNE, VIC.

Phone: 64-3351 (10 lines)  
Telegrams: "Metals," Melb.



HANSON ROAD,  
WINGFIELD, S.A.

Phone: 45-6021 (4 lines)  
Telegrams: "Metals," Adel.



Sub-Editor: ALAN SHAWSMITH, VK4SS  
35 Whynot St., West End, Brisbane, Qld.

Worthy of comment this month is the improved conditions on 21 and 28 Mc. The latter during the mornings has been open to U.S.A., Central America and Caribbean areas, as well as a few short skip signals in the Pacific and South East Asia. 21 Mc. also in the course of a day is open to North and South America and Asia, with Europe putting in a brief appearance. The later openings are occasionally at night around 1800 G.M.T. Both these bands should steadily improve.

20 mx, of course, is wide open to everywhere during each 24-hour cycle. 80 and 40 mx appear to have fallen away somewhat; the 80 and 40 bands on the other hand are being something of a fringe band, with signals weak and difficult to work. On 80 mx the Asians are becoming audible before midnight, but the QRN at this QTH is also increasing rapidly.

#### NOTES AND NEWS

**Easter Is.:** Wally WASPTQ plans to operate from here for a period of three months, starting about Oct. 16. He'll be using a Swan 350, but is unsure of his call sign at the moment. (LIDXA)

**United Nations Neutral Zone:** Paul IIRBV will be operating IIRBV from what might very well be a new country for D.X.C.C. He plans to be on s.s.b. only. Probably QRT by the time you read this, but if you made a QSO, QSL to IIRBV, P.O. Box 7308, Newark, New Jersey, 07107. (LIDXA)

**VE3XF:** QSLs may be had from ONSPD, the customary G.M.T./G.M.D. and SAE/IRCS for reply are required. (LIDXA)

**VUDIA QSL:** These may be obtained from the Hon. Mr. S. S. VUDIA, Director, Assistant Director, I.S.P.W. Sdn. Port Blair, Andamans, India. A dollar or so goes a long way in assuring speedy and direct reply.

**Wallis Island:** FWBRC, Robert, has a skip with some W/KT stations most Saturdays and Sundays at 0600 G.M.T. on 14244 a.s.b. (LIDXA)

**Cameroons:** HK1QW will be here for a two-year stay. Call now T1QJ00 QSL via W4DQS.

**Malawi:** 7Q7PBD, Peter, plans to be active again now that he has returned. (G3UGT)

**Seychelles:** George VQ9G is active from here. (G3UGT)

**TR3AD:** is active a.m., around 21.00, 14223 kc, mostly week-ends. TR3AG is still active a.m. (G3UGT). QSL via Guy Vallier, B.P. 157, Libreville.

**Zambia:** Bon W4EKK is active 15, 20 mx. (G3UGT)

**Greenland:** All KG1 now changed to QX5. (G3UGT)

**Canada:** For the Centennial year 1967 all V.E. prefixes change to 3C, 3V, to 3E. VE3P is active week-ends around 14339 kc from 2100Z QSL P.O. Box 684, Guatemala City. (G3UGT)

**Indonesia:** Bob 8V1LP is presently signing WIGTA/8P7 from Sumatra. He will be on almost daily at 1400 G.M.T. on 14140 a.s.b. and will be operating 20 mx as well as c.w. on all bands. (LIDXA)

**Brunei:** W5VMM on 14120 listening 14210 at about 1230 G.M.T. is active. (LIDXA)

**Christmas Island:** VK5DX and VK5KX1 were back again. VK5KX1 was worked on 14110 listening 14240, at about 12-1600 G.M.T. QSL via W2GKH. (LIDXA)

**China:** FWTW will be here on about 14210 at 1145 G.M.T. He usually QRT as soon as the pile-up grows. QSL KEMGE. (LIDXA)

**Ebon and Cermoran QSLs:** These are not worth the paper they are printed on. You can hang them next to your KW4SWAY and your Charger card. They count for nothing, and A.R.R.L. has disqualified them for D.X.C.C. status. (LIDXA)

**Solomon Is.:** Steve VK4LN has been active on 14240 around 0600 G.M.T. QSL via W7WLL. Also VR4CR 1415, 0500Z. (Fila, Dixer)

**Galapagos Is.:** VK5HFN and VK5LJG are both active on 14 and 21 Mc. (Fila, Dixer)

**Cretie Is.:** VK5HFN will stay here for two years. QSL via W3KHC. (VE3PXF)

**Dahomey:** 5N2AAW and 5N2AAK have license to operate from Dahomey. They will be active week-ends. Signs T1YDZ. (VE3PXF)

**Das Is.:** Active here is YM5DAH on 21 Mc. s.s.b. QSL DJ4AB.

**Alabata:** VE9QHY is said to be active, for a period of six months. Modes c.w./s.s.b. 14 Mc. (VE3PXF)

**Farquhar Is.:** Don W9WNV at the time of this is about to open from here after just concluding a stint from VE9QAA/D. Don't worry. In Oct. with VE9QAA/D and Jose CR1GF intend to go on from here to other exotic Indian Ocean areas so keep an ear to the frequencies. Don is always easily located by the big pile-up about 5-up from his frequency. QSL via CL100.

**Guam:** W4BPPD info from here says that Jack V5JJC is on right now from 1200-1600Z. Freq. approx. 14023 and 7008. Also uses a.m. QSL V5VA. Jack will QRT from here on Jan. '67 and move to Malaysia where his call will be 9G3JJC. (LIDXA)

**Gus, W4BPPD:** The great DX-peditioner is now putting out a DX magazine. It is reported to be a good publication and it should be if it included extracts from Gus' fabulous travels. No other info as regards rates, etc. (LIDXA)

**Cardigan Is.:** VP3HDL reported active on 14 Mc. around 14000. (LIDXA)

**Uruguay:** You have worked CX8AA. This is Wili from Zanbari, who incidentally admits unashamedly that he is an uncertain QSL. Did anyone get a card from him when he was VQ1GET? However, now that he has apparently W8WZL, I will handle the situation, all should be OK.

**Axeres:** Lloyd and Iris are currently signing CT2YA from here. Some doubt as to their next movement, but keep an ear to the usual frequencies. (LIDXA)

**Grand Cayman Is.:** This stink is now over, but I have been asked by Doc K4CAH to publish QSL info as there seems to be some confusion in some ZF1EP, C.O. W4PJJG, P.O. Box 1647, Ft. Lauderdale, Fla. 33302. Several VEs made the mistake.

**Antarctica:** KC4USH gives his QTH as Howard Station, 2,000 miles south of the N.Z. QSL K1NAP. Davisville, Rhode Is.

**Timor:** W4BPPD by courtesy of ZL1HVS.

**Port Timor:** CR5AB is not reported as a boot-legger. Was thought to be ex-CR4JJ, but not so.

**Sheard Is.:** GM3SVK active and looking for Oceanic stations on all bands including 18 Mc.

**Volcanos Is.:** KG6JC still active, 14 s.s.b. 0832Z.

**South Orkneys:** LU1ZG, LU2ZG, VP8EG all on 14 c.w. 0730Z.

**VE4LN/VRI:** reported as gone.

**Belawana:** (used to be Bechuanaland): ZS8Q on 25 Mc., a.m., 1960z.

**Jan Mayen:** JYXW 14 c.w. 1400Z s.s.b. 1700Z. New ZF1EP, FZ1EP, FZ8Z worked on 20 c.w. 1100Z QSL FZ1ZD.

**Dakar:** 6W6DD daily on 14 c.w. 0730Z.

**Lord Howe Is.:** When you read this if all goes according to plan, Arch VK5XK will be in the middle of the ocean, 1,000 miles from this peaceful spot. Bands 80, 40 and 20 c.w. around 3500, 7610, 14015 give or take a few, depending on QRM.

#### ACTIVITIES

Dad VK4MC reports from the Gold Coast the conditions over there have improved. Another convertee to 14 Mc., he has been working on 14 Mc. 4X4HW, GM3DPK, VWSARL DU1EH, K4CUSS, GM3CPMV, SL8SH, IS1TDW, IT1SAL, CX1AA, CX3CO, HX1AL, FB8VY, FB8VZ, OX3BX, KC4USH, also K1 and Ws on 10 mc.

Chas VK4UC, who really runs QRP, logged these nice ones on 14 Mc. c.w.: VP8HJY 1030Z, K5K1S 0600Z, UGGAW 0430Z, ON4NC 0630Z, K5K1S 0700Z, K5K1S 0800Z, HCF1H 0700Z, K4C8C 0800Z, K5K1S 0800Z, CX-9AAN 1040Z, HK5YC 0600Z, US2AKW 0600Z, FB8VY 0700Z, HK7UL 0700Z, also Europeans.

Peter VK4PJK writes giving an impressive list of 8.8.1. stations he has worked so far. His Galaxy 10 team seems to be really doing the job. Peter reports many good openings on 15 and 10 mc, which is confirmed by other reports, both local and overseas. On the latter he has been working on 14 Mc. and 10 mc. The results were excellent at good strength, also some Oceanic stations and good calls such as HVWV, CR8AK, VASRG, MP4MAW, FPA8, PAOL8, SM1SX, ZC4CN were QSOed just to mention a few. On 20 mc some of the newer ones QAOE, VASRG, V80CQ, 40MAGH, VP8HJY, F1KPC, C1PC, ON4NC, V1NABZ, 2MPC, VERAUT, HK2KL, VQ9AA, VQ9AA, ZS-6VX, ET3AC, OK1AOE, etc.

Ken VK5TH, with his big quad, landed this morning on the Gold Coast. He has worked C6CA, C6SAO, 15W, Shetlands, CN8V, CR-7G, CR1GF, CT5AUH, CX1FB, CX1OQ, CX9CO, CX5AAN, CX2CO, E1SS, EP3BQ, ET3AC, HX1AL, HX1C, GM3CPMV, MET1H, GM2HZZ, HX1AL, HX1C, HX1D, HX1E, HX1F, HX1G, HX1H, 40MAGH (Guantanamo B.), OASV, OX3BX, F1PQZ, SL2ZV, VE1FJZ/SU, SVIBH, TG8CJ, TIRLH, UFKEPU, UFQZB, V0HJP, VP2AA, VP2KJ (S. Kit), VP5BDA, VQ9AX, VQ9AA, D, VE3TC, VV8CA, VV8AA, ZC4CN, ZC4CI, IIRB/4U,

5X4HO (Israel), 5A4TR, 5U7AK, 506BW, 5Y-2, 5W3RS, 5W3RS, 5W3RS, 5W3RS, received 1401Z (Jan. Mayen), 11CX7/15, ZB2SAM, VZ8RJ, W3HWR/VPS, 5G1FRE, ZC4CI, TG8CJ, E1SS, VP2AAW, VP2AA, VP2GR, VP2GS, HB9AB.

#### QTHs

K54CC—Box 1146, Miami, Fla., 33148.  
CI1HB, HIC1B—W3CZQZ.  
W9GTA/EP—W2CTN.

VQ8AA—VQ8AD.  
IIRB/4U—W2GHC.

PJ2AO/2—P.O. 273, St. Nicolas.

W3HWR—W3HWR.

H8RXTM—U.S. Embassy, Santa Domingo.

CT5AS—R.S.G.B. ex-G3SJ.

V5HWR—Kuria Muria—V5ARV or R.S.G.B.

5J4RCA—Box 2206, Madelen, Colombia.

CO5MN—Box 162, Bayamo, Cuba.

#### SUMMARY

Being a Ham is belonging to the great Brotherhood. One half-million of us: equal, without class, prejudice, color or creed. But even within this brotherhood there are differences created, to meet the needs of those who have special interests or activities. The Int. S.s.b. put personalities before prefixes. The A.H.C. or Award Holders' Club is self explanatory in its name. Also other clubs for technical discussion, other than social togetherness. In them each Ham finds his sense of belonging according to his particular desires.

Let me bring to your notice the F.T.C. (Professional Technicians' Club) membership is world wide and anyone who is disabled, pensioned, retired or has a valid reason for not pursuing further the rat race may apply. The resultant certificate makes good wall paper, but most important, it is a certificate of good company. I have read the membership list and it includes some worthy names. Ham and otherwise. Many are disabled through war or accident. The president is confined to a wheel chair, but his endeavours show him along with countless others of this world's limping men that the word defeat is not in his dictionary. The club has its freq. for rag chewing. If you are interested, write to P.L.C. W4PJV, 100 W. 4th St., Malibu, Calif. Box 3042, Riverside, California, 92503.

My thanks to the month's contributors: LIDXA, Fila, Dixer, "Air Waves," G3UGT, ZL1HVS, (Ed. "Break-In"), VE3PXF, VK4UC, VK4PJK, VK5LX, VK4MY, 73, Al VK4SS.

#### VK CONTEST MEN

Remember your 1966 VK/ZL Contest log must be posted this month. It must arrive in ZL before 31st December. Address: N.Z.A.R.T. Contest Manager, 152 Lytton Road, Gisborne, New Zealand.

★

## NEW CALL SIGNS

### AUGUST 1966

VK1ZMB—B. J. Mayfield, Reid House, Allard St., Canberra.

VK2BDR—A. M. Brighton, 73 Best St., Wagga Wagga.

VK2BHZ—C. S. Shaw, 193 Jamison Rd., Penrith.

VK2BZH—H. J. Thompson, 34 William St., Hornsby.

VK2BKH—R. H. Harvey, 18 Hilltop Creek, Fairlight.

VK2BMG—G. M. Browning, 34 William St., Gladesville.

VK2ZGL—S. G. Leathem, 31 Arcadia St., Coogee.

VK3AKL—K. S. Hunt, 112 Roslyn St., Middle Brighton.

VK3AYN—W. G. Gilbert, 1 Roseberry St., Hawthorn.

VK3ZK—G. J. Cohen, 24 Pakington St., Kew.

VK3ZSS—D. L. De Vries, 167 Lloyd St., Moe.

VK3ZTD—T. D. Ryan, 56 Hillview Ave., Mt. Waverley.

VK3ZUK—B. K. Freer, 7/88 Brighton Rd., Brighton.

VK3ZV—A. G. Le Grip, 37 Moorhouse St., East Camberwell.

VK4CM—C. A. Miller, "Lameah," 26 Grigor St., Macfarlan Beach, Caloundra.

VK4ZDB—L. G. Gurnett, 20 Hardgrave Rd., West End, Brisbane.

VK4ZDT—R. Brooks, 142 Long St., Toowomba.

VK4ZJE—K. Edwards, 39 Robertson St., Ipswich.

VK4ZWE—W. E. Bennett, 24 Oxford St., Buranda.

VK5ZIA—R. W. Anderson, 9 Stockton St., Eltham.

VK5ZME—R. E. Olesnicky, 25 Edwards St., Colne Lane Light Gardens.

VK5ZRA—J. A. Cooper, 33 Lincoln Cres., Poeraka.

VK6ZEX—B. C. Campbell, Flat 9, 90 Wanneroo Rd., Tuart Hill.

# A LARGE RANGE OF TRANSMITTERS, RECEIVERS, TEST GEAR, AND DISPOSALS ADIO PARTS AVAILABLE

## ★ TRANSCEIVERS, TR1986-7

115-145 Mc. Employs heterodyne exciter in tx. TT15 p.a. Single xtal locks Tx and Rx on same frequency. In-built modulator. Supplied with 4.86 Mc. xtal. \$30, circuit \$1.

## ★ MARCONI TF1101 R/C OSCILLATOR

20 c.p.s. to 200 kc., 1% distortion, current model. \$240.

## ★ SCR500 DUAL CONVERSION COM. RECEIVER

160 metres to 6 metres, Amateur Bands only. 3.5 Mc. xtal band edge marker, xtal supplied, product detector for s.s.b. \$240, 10% discount for cash.

## ★ SCR522 V.H.F. TRANSMITTER/RECEIVER

100-150 Mc. Complete with tubes, \$28.

## ★ PERSPEX SHEET

1/16 inch thick. Size 44" x 16". \$1 per sheet.

## ★ COMMAND TRANSMITTERS

4-5.3 Mc., 5.3-7 Mc. Complete with tubes, \$15.

## ★ TR3624 TRANSMITTER/RECEIVER

Approximate frequency, 200 Mc. Contains 46 miniature tubes, \$30.

## ★ 3J160E HIGH POWER TRIODES

120 Mc. full ratings. Heater 10v. 29a., anode max. voltage 3000v., anode max. current 1000 mA., r.f. output 2150 watts. \$8 each.

## WANTED TO BUY

Communication Receivers, Test Equipment, etc. Call, write or phone. Equipment inspected and picked up at your convenience any night or week-end.

## ★ VALVES

EF50, 20c ea.; 7C7, 10c ea.; CV131, 6CQ6, 50c ea.; 6AC7, 20c ea.; 6AL5, 20c ea.; 6C4, 6AMS, 50c ea.; QQE03/12, \$2 ea.

## ★ SIGNAL GENERATORS

TE22 Audio Generator, freq. range: sine 20 c.p.s. to 200 kc., square 20 c.p.s. to 25 kc., in four ranges. Output, 7v. p-peak. Output impedance, 1,000 ohms. Price \$42.

## ★ METERS, P25 TYPE

0-500 uA., \$5.25; 0-100 uA., \$6.95; 0-1 mA., \$4.50; 0-10 mA., \$4.50; 0-50 mA., \$4.50. Full range of Meters and Multi-Testers available.

## ★ CO-AXIAL CABLE

UR70 72 ohms, 3/16 inch diam., in 27-yard rolls, \$2 plus 75c pack and post. In as-new condition.

## ★ RAIB COMMUNICATIONS RECEIVER

150 Kc. to 15 Mc. in six bands. B.f.o., etc. Genuine original condition, with a.c. power supply, \$70.

## ★ TRANSISTORS

Brand new. OC72, OC44, 2N132, OC66, OC45, 80c each. AT1138 Power Transistor, 30w., Class B, \$3. Also Diodes: OA71, OA81, OA95, 35c each.

## ★ SR700A TRIPLE CONVERSION COM. RECEIVER

80 metres to 10 metres. 1st and 3rd oscillators xtal controlled, 3.4-4.0 Mc. tunable i.f., selectable sidebands, 85:1 geared dial, v.f.o. output for transceive operation, selectivity: 0.5, 1.2, 2.5, 4 kc. Internal 1 Mc. xtal calibrator (xtal supplied). Undoubtedly the finest receiver ever to come out of Japan. \$500, 10% discount for cash.

## ★ MILLER 455 Kc. PRE-WIRED I.F. STRIPS

Comprises two i.f. stages, ceramic filter, diode detector, 55 db. gain, NPN silicon transistors, d.c. requirements 6v. d.c. 2 mA., size 1 1/2 x 1 x 1/2 inch. \$8.70 inc. tax.

## ★ TR10A MULTIMETERS

100,000 ohms per volt. Ranges, d.c. volts: 0.5, 2.5, 10, 50, 250, 500, 1K; a.c. volts: 2.5, 10, 50, 250, 1K; d.c. resistance: 10 uA., 1 mA., 25 mA., 250 mA., 10 amp.; resistance: 20K, 200K ohms, 2 megohms, 20 megohms. To clear, \$2.95.

## ★ POTENTIOMETERS

Wire wound, 40c each; carbon, 25c each.

## ★ RESISTORS

1/2 watt, I.R.C., Welwyn, Eire, Ducon, Philips, \$2 per 100.

## ★ 1/2 H.P. 2-STROKE MOTORS

Ohlsson and Rice. Brand new, just imported from America. Weights only 5 1/2 lbs. 6,300 r.p.m., supplied with 3:1 reduction gearbox, output 2,100 r.p.m. Ideal for driving Alternators for Field Days. Fuel consumption 1 pint per hour. \$30.

## ANY QUERIES

Beginners are welcome, ask Jim and Laurie Gardiner any questions. They are Amateur Radio operators and will be only too pleased to assist.

## ★ CRYSTALS

Personal shoppers only, \$1 each.

## ★ SPECIALS

3AP1 c.r.o. tubes. New in cartons, \$1.25.

3000 type Relays, 50c each.

Inter-Office Phones, 15-station type, \$4 each.

7-pin skirted Valve Sockets, P.T.F.E. insulation, silver plated, only 20c each, c/w. shield. Speaker Transformers: 7000 ohms to 2 ohms; 10,000 ohms to 3.5 ohms; 50c each.

9-pin skirted P.T.F.E. Valve Sockets with shield, 50c each. Irish Recording Tape, Mylar Base: 150 ft. x 3 in., 75c; 900 ft. x 5 in., \$2.75; 1150 ft. x 6 1/2 in., \$3.50; 1800 ft. x 7 in., \$4.75.

3 uF. 1000v. d.c. Block Capacitors. Only 25c each or \$2 per dozen.

## ★ MINIATURE CAPACITORS

New shipment. 600 v.w. Values: 0.001, 0.02, 0.005, 0.0005, 0.0002, 0.0001 uF. \$2 for 80, plus freight.

ALL ITEMS FREIGHT EXTRA

# UNITED TRADE SALES PTY. LTD.

280 LONSDALE ST., MELBOURNE, VIC. (Opp. Myers)

Phone 32-3815

# VHF

Sub-Editor: CYRIL MAUDE, VK3ZCK  
2 Clarendon St., Avondale Heights, W.2, Vic.

Well the Festive Season is around again with the Royal Hull Memorial Contest, the VK3 New Year's Field Day and let's hope lots of DX. This will be my last note until February so The Compliments of the Season and the best of DX. How about this for a New Year's present? "In A.R." notes neatly typed on half a quarto page by 25th of the month. 73, Cyril 3ZCK.

## V.H.F. CONTEST/FIELD DAY

The V.H.F. Group are holding a large scale contest cum Field Day in N.S.W. over the New Year Week-end. All Divisions are invited to participate in this previously successful contest in which logs have been received from all States of VK and ZL.

The contest will be of three days duration. i.e. Saturday 31. Sun Jan 1 and Mon Jan 2. It is felt that this gives mobile operators a reasonable amount of time in the field. Perhaps interstate V.H.F. Groups could organise stations in their own States to help make this.

The times of operation will be as follows: Saturday 31/12/66 1700-2100 hrs. E.A.S.T. (0700-1100z 31/12/66) period one. Sunday 1st Jan. 0500-0900 hrs. E.A.S.T. (1800-2200 1/1/67) period 2. 1100-1500 hrs. E.A.S.T. (0100-0500z 1/1/67) period 3. This is a change from the contest only 1800-2100 E.A.S.T. (0700-1100z 2/1/67) period 3. Monday, 2nd Jan., 0500-0900 E.A.S.T. (1800-2200z 2/1/67).

Last year sieds were made with ZLs at 0400 E.A.S.T. the result being a VK-ZL contest. There are three sections for the contest: Section (a) home station—open. Section (b), field station—open. Section (c), field station—2 metres only.

Open sections are all bands 144 and up. Six metres not included owing to peculiar propagation conditions.

Scoring is as follows: For 144 Mc., 0-50 miles, 1000-1500 miles, 5 pts.; 150-300 miles, 10 pts.; 200-300 miles, 15 pts.; 300-500 miles, 20 pts.; 500 and up, 40 pts. For 432 and 576 Mc., multiply by two, and for 1296 Mc., multiply by three.

The normal numbering system will apply e.g. 5000-5999 for c.t.s. Logs may be submitted for all periods worked, but only one period may be submitted for scoring with the exception of the message handling section, which should be submitted as a separate part of the contest—therefore you may submit message handling log along with the DX log.

Interested parties should contact the contest director, the VK2 Group for further details, we would be pleased to do this for you, the following details: Name, Address and Call Sign, proposed location, frequency of operation and expected time of operation—this applies to either home or field stations. You will not be asked to call the contest for all information and will keep all interested parties informed. Please send in details as soon as possible to Mr. P. Carter, VK3ZPC, 5 Bell Place, Mt. Pritchard, N.S.W.

## HUNTER RIVER BRANCH

32 Mc.: Things have been quiet for the month of October, the only break throughs so far being the small one reported when Bill 2ZWM hit the jackpot, Channel 9 has been heard often but think this is only Wagga or Wagga.

Most of the 32 Mc. boys have been keeping an eye on the band, but nothing so far. The 32 Mc. net is in operation at 10 a.m. Saturdays on 32 Mc. Saturday. All stations have been in the band, but with the storms and west winds, the band has been noisy. Kev 2ZKW now has his 6146 final going on this band and has tested it with Max 2ZMO. Luckily for Max he only had 300W. and net 100W. so you VK5s look out, we have had to turn down our converters and speakers to the bench (Note, many VK5s run in excess of 60W. on 6 m. as well—Ed.) By the time this gets into print, the 32 Mc. band will have been open a number of times. See you all on 59 Mc. 73.

144 Mc.: The main events this month have been our yearly Convention and Field Day, with our monthly meeting on the Friday night

with a competition for home-built gear. This was won by Bill 2ZWM, who also claimed a 6 and 6 m. tx with a minimum modulation. His prize was "Radio Designer's Handbook" so now you VK5s can get all the answers from Bill. It is noted that only four took part in the competition, all being Z calls.

On the 28th the meeting was opened to Sydney, quite a few were caught unprepared. The lucky ones were Gordon 2ZSG, Bill 2ZWM, Des 2ZDN and a few others, most signals were 9 plus and the band stayed open till fairly late. The band was stayed open till 2200 by Dick 2ZCP on 432 Mc. while the band was open. 73, Mac 2ZMO.

## NEW SOUTH WALES

The V.H.F. Group Christmas Party will be held on the 2nd of December at QTH of Joe 2ZOO at Tralers Ave., Killarney Heights, starting at 8.30 p.m. There will be a fox hunt prior to the event—for details of this keep an ear on the broadcast. If you intend coming, please advise the host or 2ZOO so we know how many to cater for.

By now the path to ZL should have opened again—if last year was any indication. We should be in for some good openings.

It has been noted that the meetings at the fox hunts have dropped a bit, so come on you mobile enthusiasts. How about coming along and enjoying yourself for the evening as well as the hot dogs and coffee at the conclusion of the meeting.

The results for the VK2 V.H.F. RD. Contest are as follows: 1st, Tony 2ZCT; 2nd, Stephen 2ZSK; 3rd, Col 2YJ; 4th, Arthur 2ZGA. Congratulations to Tony who has done the hat trick of three wins in a row. The trophy for this will be presented to Tony at the Christmas Party.

The October meeting was very well attended, with Keith 2ZK lecturing on the uses of various types of test equipment. Equipment display included a spectrum analyser, frequency counter, audio signal generators, and many other pieces of test equipment.

The December meeting will be the Annual Auction Night, which usually draws a good crowd. The January meeting will be an open night when anyone can get up and talk on his pet subject or show slides or movies.

The committee would like to hear from any of the country stations who wish to work into Sydney—Orana, Orange, Lithgow, Bathurst, Gunnedah, etc. (Melbourne operators would like to hear from any Sydneyites wishing to work into Melbourne.—Ed.)

Reg 2ZM is on regularly from Canberra and was portable on Mt. Ainsley with 1ZCG for a couple of weeks ago. The signals into Sydney were excellent. 73, 2ZSK.

## VICTORIA

Conditions over the month of October have been reasonably good with an excellent opening to VK7 on 2 m. and to all States on 6 m. I would like to request all VK operators wishing to work ZLs to (a) On 2 m. call with their beams. East between 1700 and 1800 E.A.T. (b) Request a return for 20 m. Ch. 15, on 50.75 and call on six metres between 52 and 53 Mc. This little request is from Harry ZL2PC. This is to have a 6 m. beacon operating from Melbourne at the end of 1967.

The proposed call sign is VK5VK. Listen to VK3WI Sunday morning broadcasts for further information. 73, Cyril 3ZCK.

## SOUTH AUSTRALIA

Strange things are happening it would appear with respect to sporadic E DX on 5 m. Since the 19th and 11th Sept. not one signal of DX proportions has been heard in VK5, that is if you disregard the Channel 0 transmissions from both VK5 and VK4.

On the local front the main 6 m. activity is provided by the ever-faithful sketch dogs on the band and also by W.I.C.L.E.N. on their net frequency of 53.1 Mc. Geoff STY, the co-ordinator for VK5, of recent months has by various means communicated in excess of 25 mobile to the net. Numerous exercises have been conducted to improve operating procedures. Nonetheless the results obtained by Geoff have been extremely gratifying. To test the capabilities of the group, an exercise was conducted on the 2nd last week-end on October 8 and 9. Briefly, the object of the exercise was to conduct message handling between Murray Bridge via Adelaide and Mt. Pirie, an approximate distance of 150 miles, utilising the mobile equipment only, and antennae, placed at strategic locations. In all, 23 stations participated and although the results were most commendable, many faults were observed in operating procedures. Officers of the E.S.C. (Ex-Servicemen's Club) were impressed by what they saw.

On the same week-end Jim 5ZGV, with Edwin 5ZTS, located at the South Hummocks, received television signals from Maitland SAO, the

Rick 5ZQ and Andrew 5ZBP, stationed perhaps at Willunga Hill, received a picture of 95 miles. Photographic evidence of the instance of 95 miles indicates that excellent picture quality was available at the receiving location. The receiving equipment at the Hummocks consisted of a 420 Mc. transistorized converter to a commercial 500 Mc. receiver. The home station of Maitland SAO transported complete to the portable location and powered with a motor generator. Whether or not this constitutes an Australian record for Amateur Television transmissions is a question. The Amateur TV. Group are extremely pleased with their results so far and intend raising this distance of 95 miles in the near future. They are also intending to make it a two-way contest.

With respect to 2 m. activity, the only news of any consequence comes from Port Pirie where Jim 5ZMJ is currently using s.a.b. It would be great if results could be had so that the t.v. situation has been minimised and perhaps extended hours of operation from the Pirie district will be available. 73, Colin 5ZJH.

## MT. GAMBIER

The South Australian Radio Group would like to advise all Amateurs that the June Convention that was postponed will be held over the long week-end at the end of January. Those who registered for the June Convention are automatically registered for the January one. bookings can be made at the hotel and no special accommodation can be made. It is therefore suggested that if you book, first make your own accommodation arrangements. Any further information can be obtained from Colin Hutchesson, 5ZKR, Yahi, via Mt. Gambier.

★

## YOUTH RADIO CLUBS

By the time this is printed, it will be the season of good wishes. I have a few myself. First a load of good wishes to all the brave instructors who weathered the 1966 storms and also had a lot of pleasure. Then more good wishes to all the W.L.A. administrators who have put in a great Y.R.S. with the end result. Special good wishes to Rex 2YA who has given so much for years before 1966. Special good wishes to the young graduates Y.R.S. who are going back to the scheme some of the boys have given in some cases more. Finally, good wishes to all the budding electronic experts they'll always enjoy it. I should perhaps add a few best wishes to my four readers over the past few months. Top job! Top job! Top effort at these notes—personal matters are pressing hard for time. Y.R.S. will continue to expand and a future correspondent will have plenty of events to chronicle.

The Article of Association of the Youth Radio Club Scheme of Victoria (Victorian Division) has been printed and no doubt Howard Rides will discuss the idea or send you a copy if you get in touch. This new development is to be watched with interest. Certainly Howard and his helpers have done a very keen and much good work is sure to follow.

Young graduates of Y.R.S. in VK2 are putting a great deal back into the scheme, particularly Roger 1RD and Susan 2ZBS. Roger is not only instructor on Friday nights for a Goulburn group of Y.R.S. but also puts a lot of work (with help from Susan) into producing the "PG3 and PG4 Bulletin," running from 4 to 12 pages and containing a lot of news and hints—4 cents a copy. Roger has also prepared a news sheet and a competition column. This contains a lot of theory notes (although of course being 28 pages, is not a text book), a set of assignment questions and other necessary comments on theory and practical sections of the course. The material is to be put out by members of Roger's Postal Group but is very likely to be suitable for clubs. Anyone who wants a copy (especially new club leaders who would like to see how another club is instructed) should send 40 cents to Roger (only with 4 cent stamp).

This raises the point of expenses. Costs are mounting as the scheme expands. There are two possibilities at the moment—one is to charge fees for registration, instruction and examination and the other is to send out the van, offer a free service (is not valued), and the other is to get many or large donations. At the very least, donations of stamps could be sent back to the Division or group which sent out our material. Christmas Island Club donated £3/11/6—why can't others give a similar amount?

I hope I'm not doing a Nellie Melba fare-well, but I will again say "Cheers" to my four readers and best wishes to the new correspondent. 73, Ken 1IKM.





# FEDERAL AND DIVISIONAL MONTHLY NEWS REPORTS

(SEND CORRESPONDENCE DIRECT TO DIVISIONAL REPORTER NAMED AT PARA. END)

## FEDERAL QSL BUREAU

Rex Glew, ex ZL2AS, now resident in Moorabbin, Vic., with the call sign VK3JAS, has been successful in obtaining his old call letters and shortly will sign VK3JAS.

Bob WACHA expects to be active from Norfolk Island for several months commencing end of January 1967. Call sign to be used is not yet known.

The V.R.Z.A. (Society of Radio Amateurs in the Netherlands), has formed a Dutch commercial radio society for the promotion and co-ordination of two-way Amateur Radio communication. Almost all Dutch active and DXing Hams are members of this Society.

The V.R.Z.A. (PA) sends QSL cards to all Dutch Radio Amateurs (members or non-members of the Society), monthly, and free of charge. The other Dutch QSL Bureau (V.E.R.O.N. of Rotterdam) sends the QSL cards to the Netherlands (PA) twice a year, in June and December, which gives a long delay. All cards for the Netherlands (PA, PE and PI stations) as well as for the Netherlands Antilles (P.J stations) and Surinam (PZ stations) and the U.S. Virgin Islands (PI stations), V.R.Z.A., Post Box 160, Groningen, Holland.

Following are the details of the Tenerife Ettoral Springs Paradise Certificate for which five QSOs with the Canary Islands are needed and the certificate is valid from January 21, 1966, ends at 2400 G.M.T. March 20, 1967. During each QSO local maximum and minimum temperatures of each station shall be mentioned and shall be also mentioned on the corresponding QSL. All modes of operation (c.w., s.w.r., s.s.b.) and assigned frequencies may be used. QSLs to be sent to P.O. Box 215, Santa Cruz de Tenerife, Canary Islands, Spain.

K.A.R.L. News says: "Recently, HM1BU call has been heard mostly on the 14 m band s.s.b. HM1BU was licensed about 3 years ago, but his licence was expired as at the date of Dec. 31, 1965. He did not renew his licence and the call of HM1BU was disappeared. Now, HM1BU call is transmitted by the K.W.M. 2 from a small island in the west sea, moreover, but it is the illegal operation. K.A.R.L. warned him by the letters not to operate illegally and to obtain the new licence. So, K.A.R.L. advised to Ham radio over the world not to contact with HM1BU for a while until he gets the new licence. K.A.R.L. does not handle the QSLs to and from HM1BU."

—Ray Jones, VK3RJ, Manager.

## NEW SOUTH WALES

The Wireless Institute Centre was comfortably filled by members and visitors on Friday evening, December 15, 1966, including the annual monthly meeting combined with the official opening of the John Peell Memorial Library.

President Tom 2OD occupied the chair and extended a hearty welcome to all. Among the visitors were Mr. Peell and party which included Miss Hardy, Mr. and Mrs. Peell and Mrs. Toohey; and Mr. and Mrs. Tracey (who had donated to the Division a large number of text books). "GST", etc., left by the late Wm. R. VK1HT, well as the trophy which was won in the 1966 VK-ZL Contest by a N.S.W. team; Mrs. McLeod (widow of the late Gordon McLeod, VK2ADC), who has donated to the Division the technical library owned by her husband. Also at the meeting was Don Wallace, W8AM, well known to the DX fraternity.

The following applicants were welcomed into membership on the Institute: Gordon Capp, Patrick C. Bennett, Peter J. Shand, Geoffery E. Bailey, Gilbert Armstrong, R. W. Walker, and the following Associates: Noel Wayne Gibson, Daniel Adrian Cliff, Alan Lloyd Ridder, A. C. C. and Andrew Kervin Clive Hutchinson, Joe Pietra, and Kendall Young.

At this stage an adjournment was made to the room where the John Peell Memorial

Library had been installed. It will be remembered that last year the Council then in office had received a donation from John Peell (VK2WJ) following the auction of his gear. Following his death shortly afterwards, Council decided that the money should be used to establish a memorial library. Much preliminary "spadework" was carried out and it is very gratifying, particularly to those who interested themselves in this project, to see that the present Council has been able to bring it to finality.

The very attractive cabinet occupies almost the whole of one wall of the centre room at W.I.C. The lower half has a shelf which holds the books and above, Councilor Charlie Wilkins, in his usual quiet way of working more than talking, has spent much time on the decor of the room and the whole effect is both forth much favourable comment. The present Council has been able to bring it to finality.

In accepting the key on behalf of the Division, President Tom said that, thanks to the many generous donations of books, the new cabinet was almost full and it appeared that a branch library would have to be opened shortly. He then tribute to the librarian, Keith de Haan (VK2UE) and his assistant, Keith Tavares (VK2UE), for their efforts in sorting and cataloguing books.

It was announced later that a set of rules would be formulated shortly to cover the borrowing of books from the library, and these will be published for the guidance of members immediately they come to hand.

The lectures for the evening was Syd 2SG, who spoke on "Appropriate two hours TV Production Techniques". The subject is such a vast one that even in a lecture time about double the usual length, Syd did very well to cover so much ground. The research necessary for such a lecture must have been colossal and the material, while very interesting to all members, would be particularly useful to those who are themselves working in the field of television and broadcasting in general.

A written note to Syd, asking him to leave the meeting early to attend another function, we must record our thanks to Stan 2ZRD for jotting down the main details of the lecture.

Syd began by giving a description of the optical system of television cameras and different types of lenses, zoom, telephoto, etc., and various methods of lighting—artistic, illumination, realism, sunlight, and lighting of the human form. In a large studio there would be from 50 to 100 kilowatts of light and a high quality telephoto lens could give a good picture at a distance of one mile from the camera.

On the electronic side of television, descriptions were given of the operation and usage of the image orthicon in studio cameras, and the kinescope in video tape recorders cameras for outdoor operation. All descriptions were illustrated by colour slides showing the "works" of the Marconi Mk. IV, camera.

Then followed a section on camera control unit vision mixing and vision distribution amplifiers which included a "lecture within a lecture" on multi-vibrators. A central apparatus room was described with slides showing both valve and transistor-operated shaping and line amplifiers which then gave details of automatic switching of television chains, studios, slide monoscopes, etc., and amazed the audience by stating that a television station could be operated by four persons, mainly by the use of multi-vibrator control. Automation performed the correct sequence of technical operation to produce the pre-arranged programme.

Some excellent shots were shown of the Ampex VTR and tape recorders and an interesting piece of apparatus which enables video tape to be edited virtually automatically. Further slides and descriptions covered a typical studio set, distribution amplifiers, and sketches of individual sections of television apparatus.

Syd's lecture was given in the usual VK2SG racy manner, and he fully deserved the acclamation of the audience following the vote of thanks moved by Stan 2ZRD.

## SILENT KEY

It is with deep regret that we record the passing of:

Ex VK2NO—Don Knock

## W.I.C.E.N. NEWS

Peter 2ANJ, the W.I.C.E.N. publicity officer, says that since the publication of the net frequencies in the monthly Bulletin he has received many inquiries regarding the 3 m Channel C (m. net frequency). The correct frequency for VK1 is 146.106 Mc. All crystal frequencies published are based on this. It will be noticed that this channel does not agree with that used in VK3, and Peter thinks this is where the difference lies. It is interesting to note that Channels A and B do agree with those used in VK3, so that people travelling with the interstate net.

## GENERAL NEWS

The Federal Councillor (Pierce Healy, 2APQ) reported that he had represented Divisional Council at the South-West Zone Convention over the October holiday week-end. Fifty-two people attended the dinner and the day events were also well patronised. The official con-

## VK2 DIVISION

### Radio Equipment Store

We would like to wish all readers the Compliments of the Season. You will find a list below of some HC6U crystals. Some of the FT243 series which have been featured over the past few months are now in short supply so please advise second choices where possible. Many inquiries for teletype were received this year and several units have been sent interstate. Inquiries still welcome as we may still have something that will suit your requirements.

The catalogue is to be revised early next year. If you have found it hard to obtain coil formers we now have quite an extensive range in 4 mm. and 7 mm. formers with cans, tag rings and slugs to suit.

Merry Christmas and a Happy New Year.

—R.E.S. Committee.

## CRYSTALS

In HC6U holders, \$1 each, limited numbers in most cases: 7586, 8964, 8971, 8977, 9044, 9051, 9057, 10,042, 10,780, 12,093, 13,930, 13,940, 13,950, 13,970, 14,050, 14,060, 14,070, 25,193 kc.

## TAPED LECTURES

21. V.h.f. Aerials, 1 hr, 32 slides, H. Burtoft, VK2AAH.
22. A Field Day with a Difference, 1 hr, 34 slides, Eric Warren.
23. Principles of A.g.c., 77 mins., 20 slides, Bob Winch, VK2OA.
24. S.s.b. and C.W./A.g.c., 73 mins., 14 slides, Bob Winch, VK2OA.
25. A New Look at Radiation, 90 mins., 30 slides, Joe Reed, VK2JR.

14 Atchison St., Crows Nest, N.S.W.

# FOSTER DYNAMIC MICROPHONES FOR HAND-DESK USE



DF-2

## SPECIFICATIONS:

Output Impedance ..... 50 ohms or 50K ohms  
Effective output level ..... -55 db. [0 db. - (one) 1V. Microbar]  
Frequency response ..... 200 to 10,000 c.p.s.

## OMNI-DIRECTIONAL DYNAMIC:

SIZE: 3" x 2-1/8" x 1".  
Cable: 12 ft. of P.V.C.  
Switch: on-off.  
Desk Stand, Clip folds for hand use.  
Colour: WHITE.  
Plastic Diaphragm.

Retail Price  
50K ohms  
£2/14/0  
+ Sales Tax 4/9

A QUALITY PRODUCT OF EXCELLENT DESIGN



Marketed by **ZEPHYR PRODUCTS PTY. LTD.**  
70 BATESFORD STREET, CHADSTONE, S.E.10, VIC.

Manufacturers of Radio and Electrical Equipment and Components

Agents: D. K. Northover & Co.; Neil Muller Ltd.; Homecrafts (Tas.) P/L.; Jacoby, Mitchell & Co. P/L.; T. H. Martin P/L.

NOW AVAILABLE—

## THE 1966 EDITION

# ★ A.R.R.L.—Radio Amateur's Handbook

*The Standard Manual of Amateur Radio Communication*

Price \$6.10 posted, or 58/6 and postage 2/6

NOW AVAILABLE—

# ★ The Radio Transistor Handbook

by Stoner & Earnshaw.

Price \$6.65 posted, or 64/9 and postage 1/9

THIS UP-TO-DATE HANDBOOK COVERS A WIDE RANGE OF COMMUNICATION  
FOR BOTH AMATEUR RADIO & COMMERCIAL APPLICATIONS

# McGILL'S AUTHORISED NEWSAGENCY

Established 1860

"The G.P.O. is opposite"

183-185 ELIZABETH STREET, MELBOURNE, C.1, VIC.

Phones: 60-1475-6-7





Harry 3ZX became our new President and controller of our Wednesday night hook-ups which will be held in future on 3610 kc. I hope to have a new Vice-President to serve Herts!! Vice-President, and Junior Vice-President were elected, Herb 3NN and Gavin 3AEJ respectively. Our W.I.C.E.N. Co-Ordinator, Roy 3ZYG, who will delegate his responsibilities to Bob 3EJ, when necessary.

Following the general meeting a display of home-built equipment was held which was won by Harry 3ZX with his all-band table-top filter z.s.b. tx-handicap of three 897 (un-estimated).

Next on the agenda was the 80 m茨 hidden tx hunt which was tracked down in pretty slick time by Roy 3ZYG—following S meter readings only. The no G.F. loop—F.M. and 31B respectively that based on the loop. 3AFU and 3IB/3ZX were only a few minutes behind the winner. The next excursion was a guided inspection of the microwave station which attracted a capacity roll-up and we are very grateful indeed to the Superintending Technical Mr. David Kentish for a most informative description of all phases even if most of us did get lost in the wave guides, channels and gyroscopes.

The day wound up with a magnificent spread at the Borderline R.S.L. Hall for which we are grateful to 3ZAI's XYL Jill, and very able, assistant Rayleen, not to mention the other ladies who contributed to the meal. Hard work, but I must also mention the President of the Tatton District Council, Cr. McLellan, who kindly addressed our meeting and took a keen interest in our activities.

The following week-end many Zone Amateurs were equally as busy with the annual Jamboree-on-The-Air. 3ZX, 3AEJ, 3ATC and 3IB are known to have participated. At 3IB, the station was set up in the local Guide Hall which is very well situated not far from the station. The hall was packed to the gills and active most of Saturday and Sunday, and a large number of Scouts, Guides, Brownies and Cubs thoroughly enjoyed the occasion. The only disappointment was the clash with the "CQ" Contest, which largely precluded satisfactory overseas contacts. Nevertheless many

fine inter and intrastate Jamboree contacts were made. This is the first time a Jamboree station has operated from Dimboola and the station was well received by the station and members of the public as well as some welcome publicity and photographs in the local press.

3AEJ is currently working on a phasing rig and hopes to join the sidebanders before long. S.W.L. Neil at Dimboola has revamped his transverter and is now using his Lafayette rx and is currently constructing a beam, so hopes to be able to copy some of the v.h.f. boys soon. Neil hopes to sit for his ticket in the near future. He is still smooching the DX band and recently broken 3FA and VSS to bring the DX countries score to 149. 28 Mc. observed to be opening to W and JA DX the past few week-ends. Chas 3IB acknowledged hearing of several hundred QSLs from the VIBR action. But he hopes to tidy these up by early in the New Year. A move of these QSLs earlier in the year interrupted these activities. 73, Chas 3IB.

## SOUTH AUSTRALIA

The monthly general meeting of the VK5 Division for October was held in the club rooms to a good roll-up of members, and took the form of a buy-and-sell. Very little official business took place, in fact when one looks back on the evening, very little was done at all and after the distribution of QSL cards was disposed of, and a short smoke-oh took place, the meeting was handed over to the gentlemen in charge of the buy-and-sell. The man in charge was Brian SCA, of Port Lincoln. For the first time in the long history of such nights, very little was offered for disposal and despite the valiant attempts of several members of the audience to keep the night open, the meeting was adjourned at the unheard hour of 9:45 p.m. A number of members stayed behind to natter and exchange ideas, but the vast majority having absorbed the lethargic conditions existing at the meeting, listlessly left for home, giving their families the shock of their lives, causing

several XYLs to wonder as to whether they should call the doctor or wait until the morning.

Opportunity was taken at the meeting to welcome back Geoff 5TY, a frequent visitor who has returned to VK5 after his sojourn in W land. He looked fit and well, and settled in at the meeting in such manner that all did remember that he had been away at all. I meant to take him up on his proposal of QSLs, but the rumours had him in residence in the area of Geoff 5TY, but I believe it will be Kensington. Right Bob?

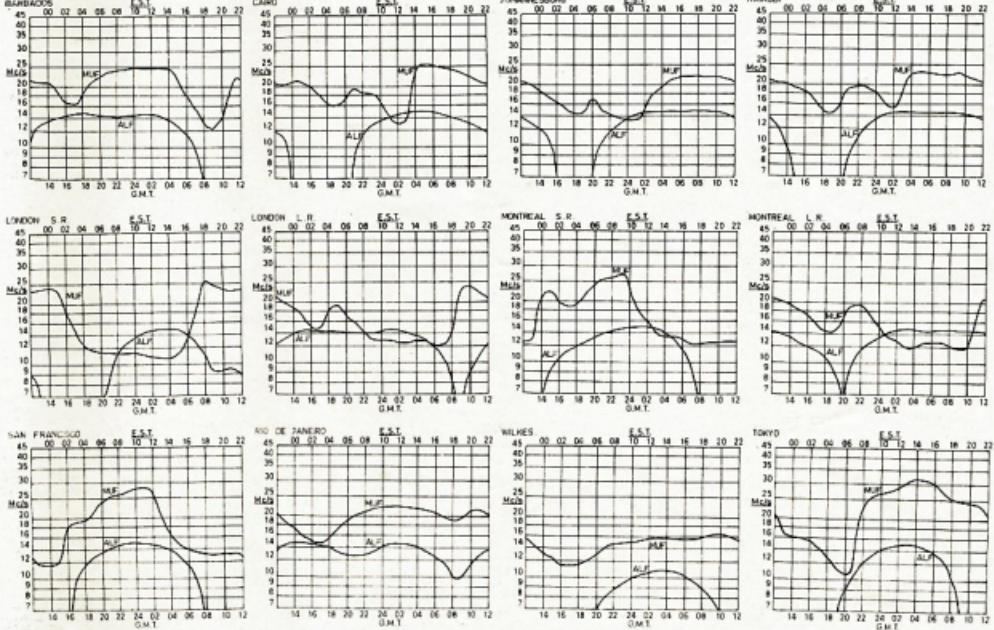
Sat next to Brother John 5VG, better known as the "Gym" as he is a great exerciser, cut to the quick when he told me that he has been nominated for the W. S.A. Club, despite the fact that he is still an a.m. man, I gave him the "Gym's" warning as to what would happen to those who desert the cause for "The Thing," but I don't think he was very impressed. Anyway, I will keep an eye on him, little does he know that I listen into his morning, noon, and night. In it Sunday morning, afternoon, or night? Oh dear, on dear, I might miss something.

Wicen was represented in the recent E.P.S. Bushfire Clean-up Week Procession the other Saturday. The vehicles were those of Trevor 5ZIS and Geoff 5TY, heavily accompanied by John 5KX, Brian SCA, Howard 5ZEE and the old reliable, George Edmedes. Both vehicles were suitably decorated with signs drawing attention to Wicen, as well as with anti-bushfire slogans, say nothing of the abundance of antiseptics, in fact they were later described as resembling a couple of enraged porcupines.

Regarding the above paragraph, was more than pleased to hear Geoff 5TY when describing the procession to the meeting, give George Edmedes a pat on the back for his untiring enthusiasm in the cause of Wicen. George is one of the most tireless workers of the members who can always be relied upon at all times for that little bit extra when needed. You'll do us George—keep up the good work.

John 5KX, completed with number one son, noticed at the meeting and from all accounts the said son is showing signs of being keen

## PREDICTION CHART FOR DECEMBER 1966



(Prediction Charts by courtesy of Ionospheric Prediction Service)

on Amateur Radio. Understand that he cut his teeth on a recent successful Wien exercise. If this is true, then he could not have had a better background.

Bob 5WA and Marshall Hider, farm buddies, noticed together at the recent Department of Works auction at Port Lincoln. The general was much impressed with the quantity and quality of the goods offered for sale, and but for the fact that they never had time to rob a bank on the way down, nor did they have a spare ford 1600 they probably would have made a better dent in the goods offered. You should have seen the glint in their eyes as they told me about it!

Bob SZNH, the instructor at the radio class, made a very good impression on his pupils. Snooping around for news at the meeting, I could not but note the enthusiasm and keen interest displayed by the said pupils in their conversation with each other, and also the respect that they had for his knowledge and the manner in which he conducted himself in their welfare.

Geoff STY, the Wicas co-ordinator, made a short explanation in answer to the letter written by John SJC on the recent exercise, not because I wanted to, but because some members in the audience seemed to have been overawed by my words in the letter. I thought he handled it quite well, as did the audience, judging by their reactions.

A number of VK5 boys, not really old timers in the true sense, but who have been in the game for a long time, were saddened to hear of the passing of Gordon 3XK and 3AU, and felt that the obituary in the October magazine spoke for itself. Speaking personally, Gordon will always be remembered in VK5 for his cheerful and adventurous approach to Amateur Radio during his time in the State and who was always more than willing to assist him in his self-assumed role of Don Quixote and the tilting at any windmills available. I sincerely regret his passing, as they never met, said Gordon.

In addition in the VK2 notes that afternoon teas are going for the asking, and prepared by the dainty hands of my pals-wishes Mona 2AXS and Bebe 2AZK and the XYLs of Count 2ZRD and 2CH. They are served with scones, strawberries, jam and cream, and codies and codies of tea, to say nothing of an eyeball QSO with the femininity. I have noted the number to ring, 30-3600, so look out girls, that number is mainly for VK5, as the lights appear from the clouds at any time. Whoosh!!

Rumour has it that the mystery of George's SCV stolen rx is almost solved, and that he is happy to report that no Amateur is involved. Nine words. George, how do you do?

Sorry to hear that Compt SEF, he of the quack-quack fraternity, has had a spell in hospital, but glad to know that he is home and on the way to good health again. Quack-quack or no quack-quack, he is a good soul.

During October at the VK5 one-way t.v. record, with very satisfactory results. The group transmitting from Willunga Hill were successfully received at South Hummocks, a distance of approximately 65 miles, being able to receive the received signal as evidence and good clear evidence it was. The South Hummocks set-up was manned by Jim 5ZGV and Edwin SZTS, with the Willunga Hill gang including Mait 5AA, Jim 5ZFQ and Andrew SZBF. No word on flows.

Jamboree-on-the-Air seemed to be quite a success in VK5, judging by the number of stations on the air for the event. During my short period of listening on the bands was intrigued to hear a voice from the shack of Jim 5ZGV, "VK5 PINT". Gosh! Now I know that there are times when our respected and revered President might wish he were anywhere than in Adelaide, but putting him in Crystal Brook was just setting him up. Another time I would expect the citizens of Manningham to put on a bit of a buck if Ross was snatched from their domain.

Received a letter and a couple of colour slides of my shack taken by Fred JYS during his recent visit. With excited VR comments, particularly in the most important position on shack table is the "Thing," black box and all, the sight of which can be expected to give my legion of a.m. followers a bad attack of the corybambolics, or possibly xpyzptbzbfk! Didn't you hear your eyes chap, was it a frame-up?

I sneaked across the border into VK3 this month—Ballarat to be precise—the reason being that my daughter was there with the adu-ding, the adu-ding, and callisthenics section at South Street, and as my XYL and I had not been there since 1949, I decided to run the risk and mingle with enemy. I managed to come out unscathed, although in many ways the VK3 participants came at me from all sides and crossings to say nothing of the stop signs. I began to wonder at times whether my visit was an unknown as I thought it was. Several times I thought I saw Pincott

(SAFJ) lurking around the corners, but luck was with me, although possibly my false beard helped a lot. Thoroughly enjoyed ourselves, and there is no doubt about it, Ballarat is definitely a garden city, well worth visiting, although I would deny it to the chaps. Note from the current issue of the VK5 journal that Gary EZK was married to Cecily on 5th September, the honeymoon being spent at Port Lincoln. I also note with some dismay that he is reported as saying that the design of the new house he is going to buy will be to next to the kitchen which will give him an opportunity of working some DX whilst doing the cooking and polishing the floors, etc. This, of course, provides me with the chance to come up with my well known and tried advice: "DX Before Dishes"! Congratulations to the happy couple, and best wishes for the future. Catch a watchful eye on the kitchen utensils, baking dishes, cake tins, etc. They have been known to become classic in the most mysterious fashion! Ask my XYL, she can speak with experience!

The appeal by Eric SZEJ in his v.h.f. notes in the journal for A.R.R.L. Handbooks and Valve Data books for the Port Pirie Radio Club, and I am sure that all further copies will be gratefully received as the number of boys interested by far exceeds the supply of books.

Visitors to VK5 during September included Doug 5EP, NZZK and 6ZDD, to say nothing of David 3ZTN and Martin 3ZOL. We trust they enjoyed their stay in the city of culture and beauty. Quiet please, gentlemen, remember we come of modest stock!

The letter to VK3 from the VK5 Federal Councilor, Geoff STY, on the matter of the proposed Federal Constitution, a copy of which appeared in the current issue of the VK5 journal, made interesting reading, and should certainly merit consideration by those concerned with the development of the new radio room to make room for Geoff, although just how we both will exist in such close proximity is open to conjecture!

It was reported in the VK5 journal recently that the Sunday morning SWL broadcasts at 5.5 Mc. were to be discontinued and that the transmission would be transferred to 7 Mc. owing to propagation conditions varying as the sunspot cycle progresses. I thought this worthy of a paragraph in the W.L.A. column in the local Advertiser, and I find at a later date that not only was this purely a test transmission on 7 Mc., but horrors of horrors, that it was on s.s.b. by Phil SNN, who in explanation said that apparently the lines of communication had been crossed somewhere, but I have an uneasy suspicion that it is just an undercover attempt to infiltrate "The Thing" into the realms of the s.w.l. and now the readers of the "Advertiser"! I tell you you have to watch them, they will come at anything!

The earlier paragraph regarding George's SCV stolen rx unfortunately has an unhappy sequel. It now appears that the culprit was a 13-year-old boy who specialised in wrecking and dismantling the parts to be used in racing. I can imagine it! A Collins rx wrecked for parts! No wonder George wept tears of blood. My sympathies OM.

In the recent fury and skurry connected with the lost nine-year-old little girl at Myponga and the subsequent activities associated with the search, noticed the name of Jack SAM, of Murray Bridge, and his alsatian dog as having been among the host of searchers. This is not the time to go into it, but I have a hunch on such public spirited actions of this nature. Nice work Jack, when will the hounds-dawg be radio controlled?

At great cost, and certainly without the permission of the gentleman concerned, I have on my definite authority that a certain VK5 has kept his radio activities hidden, or should we say concealed, for years from even his family. It seems on a certain occasion a dogged boy friend happened to catch a glimpse of the shack and queried the daughter "Is your father a radio amateur?" Daughter's reply: "I don't think so," would rock everything, especially as he is still ranked among the top VK5ers and down the list of VK6s. Just how did he do it? The name will not be revealed to protect the guilty, but just have a teeny-weeny guess!

Uncle Tom STL has joined the 5.5 Mc. net using one of the J.A.L.A. converted 5.5 Mc. receivers, of which there are about 45 in use at the moment of writing. This forms the basis of a useful network, should the occasion ever arise, which we hope never will, but it is better to be prepared.

Jim 5ZK has been on the sick list again, bronchitis, and its associated discomforts. Jim is giving Frank SMZ a run for his money for the title of VK5's king to doctors and chemists because he is, at the moment of writing, about to enter hospital for surgery on his back,

although he bravely assured me that it was nothing, only two or three stitches or so! What is he to be a hero. I nearly keeled over at the thought of those stitches. Hope all is well by the time you are reading this Jim. Can't help but notice an increasing tendency in the magazines for readers to write in and somewhat shoot down in flames the writers of articles which appear at various times in the magazine. I can't claim to be a judge of good manners myself being only in the peasant class, but I do believe that the writer of the article would serve the same purpose, without holding the author of the article or column up to the public gaze. After all, it is hard enough to publish an average Amateur to put on to paper, let alone cheerfully accept a fee of criticism. The time taken to write in the letter of criticism could well be put to writing an article on the subject and making the time to go to the pub.

Well, just as I was about to put this month's notes to bed it dawned on me that they are for the December issue. Therefore, it is with pleasure that on behalf of the VK5 Division I extend the Division's greeting to all other Divisions. May Xmas be a merry one to all. Don't eat all the goodies, leave some for me, and above all, when the festivities are at full blast, spare a thought for a grey haired old man who will be in hiding somewhere in the hills, far to the west of the inevitable invasion of VK5s during the festive season. T3, the 5PS—Pan-Sy to you.

## WESTERN AUSTRALIA

Greetings and salutations to you all from this side of the neck! I am sure the months are certainly rolling around in quick time this year, or so it seems, however as my old pal Alby was wont to quote: "everything is relative." That scratching, scraping noise you can hear is the old gasman and bandit back there, and the workers struggling to bring his way down the chimney. Personally I am going to leave the door open for him in case he damages the Swan 350 I ordered.

On the sick list this month we have Bill 5WP, a man member who has had quite a spell in hospital and is now on the road to recovery as swift and easy for you Bill.

Another who has also been in hospital is Mike 5QJ, who recently moved into VK3 territory in order to undergo surgery. Our best wishes for speedy recovery are also extended to you QM.

Well another Jamboree-on-the-Air has come and gone, what a pity it was marred by a whole-wide DX contest. Of course, there are those who believe that the Jamboree made the DX contest, but I believe that if the DX contest is correct, it seems a great pity that the powers that be could not choose a couple of weeks-ends which do not clash. After all, there must be plenty of "free" weeks in the contest calendar.

During the last couple of Divisional meetings we have been fortunate enough to view a couple of excellent technical films. After viewing the first one of these, Herb 6XO was determined to present to the next. Sure enough, he turned up, complete with tape recorder (unning lad) after travelling the 160 or so miles from Wickepup. It was also rumoured that the man of Mystery was going to turn up in force, but they failed to show. Probably they learned that I had alerted the local constabulary.

News to hand that Herb 6XO has not only been on the air, but also in the air, working his way around with charming Right across to ZL I understand. Only a relatively short trip from the point of view of time, but none the less very enjoyable I'll bet.

The more I think about it, the more I come across a mighty signal which originated from the QTH of 5GBH, who it seems, is making something of a comeback to Ham Radio. All the more to merier.

Local conditions, the average seem to be improving again, with some good openings on 15 and 16 m. 40 m. is still very patchy, while 80 is enjoying quite a spate of QRN.

From the Cloak and Dagger department, my spies have taken off sufficient time from their play to report Brian 5EV and Peter 5ZEP have made moves to alter sky line around their homestead. A tower of some sixty odd feet complete with rotators and so forth. What they have in mind I have not yet fathomed. Together with their hilltop station, this structure should provide an additional hazard for unwary airplane pilots.

Talking of airplanes and pilots, reminds me that Tom 6TH recently took part in an air race. Always up in the air about something, this chap, why, last time I heard about him he was 40 feet up on 5RG's tower helping with some repairs. Put on quite a respectable sideband signal, too.



# INDEX TO VOLUME 34-1966

## ANTENNAE

An Indoor Pylon Slot Aerial  
for 145 Mc. .... May p.11  
Matters Mobile .... Feb. p.3  
Series Phased Array for 14  
Mc. .... Oct. p.4

## AUDIO AND MODULATORS

Matters Mobile .... Feb. p.3  
Transistor Amplifier Design:  
Part One .... Sep. p.5  
Part Two .... Oct. p.7  
Part Three .... Nov. p.9

## BOOK REVIEWS

Mullard Voltage Regulator  
(Zener) Diodes .... Sep. p.15  
Technical Topics for the Radio  
Amateur .... Jul. p.10  
The Radio Amateur's Hand-  
book .... Jul. p.10  
Transistor Interchangeability  
List .... May p.17  
1966 World Radio T.V. Hand-  
book .... Aug. p.12

## CONTEST RULES AND RESULTS

Aust. Results of World-wide  
DX Contest, 1965 .... Oct. p.15  
John Moyle National Field  
Day Contest:  
1966 Results .... Jun. p.9  
1967 Rules .... Dec. p.11  
Remembrance Day Contest:  
Corrections and Additions  
to 1965 Results .... Mar. p.13  
1966 Rules .... Jun. p.12  
1966 Results .... Nov. p.18  
Ross Hull Memorial Contest:  
1965-66 Results .... May p.18  
1966-67 Rules .... Nov. p.17  
VK-ZL-Oceania DX Contest:  
1965 Results .... Apr. p.13  
1966 Rules .... Jul. p.13

## INSTRUMENTS

An Experimental 100 Mc.  
Crystal Oscillator .... May p.10  
How is Your Dial Calibra-  
tion? .... Dec. p.7  
Matters Mobile .... Feb. p.3  
Modifying the Palec Valve and  
Circuit Tester .... Apr. p.2  
Monimatch Mark 3 and 4 .... Feb. p.11  
Self Powered C.w. Monitor .... Jan. p.9  
Simple Transistor Tester .... Dec. p.3

## MISCELLANEOUS

Amateur Radio Hall of Fame  
Announced .... Oct. p.17  
Australian DX Century Club  
Award .... Jan. p.11  
Australian D.X.C.C. Countries  
List .... Jan. p.12  
Australian V.h.f. Century Club  
Award .... Jan. p.11  
Boeing Demonstrates Meteor-  
burst Communication .... Jun. p.15  
Central Queensland Branch  
Display .... Jun. p.15  
Father Xmas, Fairy Godmoth-  
ers, and all .... Aug. p.11  
"Fifty and Over" .... Jun. p.11  
"Fifty and Over" .... Oct. p.14  
Gateway of India Award .... Feb. p.15  
Great Circle Map .... Feb. p.13  
Higginbotham Award .... Jun. p.21

## Hints and Kinks:

Feeder Spacers .... May p.17  
Filed Information .... Sep. p.11  
Protective Cover for SO239  
Connector .... Jan. p.8  
Lightning .... Apr. p.15  
More About Morse .... Jan. p.7  
P.A.C.C. Award .... Jul. p.16  
Project Australis .... May p.14  
Project Australis .... Jul. p.11  
Project Australis .... Nov. p.21  
Reciprocal Licence issued by  
U.S.A. .... Jun. p.21  
Standard Stations received in  
Far East .... Jun. p.15  
Sunspots and Predictions .... Sep. p.14  
Survey of Occupancy of H.F.  
Bands .... Oct. p.15

## TELEPERSONALITY—GEORGE JACOBS

The Radio Ham .... Sep. p.20  
"They and Me" .... Sep. p.13  
VK4AT might go on the Air .... Aug. p.11  
Further Notes on VK4AT's  
Power Supplies .... Sep. p.7  
VS9MP, Maldivian Is. .... Jun. p.11  
W.I.A. Federal Convention,  
Easter 1966 .... May p.15  
W.I.A. Federal President's  
Annual Report .... Jun. p.17  
YL Operator Club .... May p.10  
YO Awards .... Oct. p.17  
YO Awards .... Nov. p.6

## POWER SUPPLIES

Portable 240V. A.C. Power  
Supplies .... Oct. p.3  
Power Supplies for S.s.b. Ex-  
citors .... Jul. p.9  
Technical Correspondence:  
Diodes in Power Supplies .... Sep. p.17  
"The Mode of Power" .... Dec. p.3  
Transceiver Power Supplies Dec. p.5

## RECEIVERS

Accessory Package for Trans-  
ceivers .... May p.5  
A High Stability V.f.o. for  
Receiver or Transmitter .... Nov. p.6  
A Pre-Amp. for 2 Metre F.M. Mar. p.5  
Audio Clipper/Limiter for  
C.w./Phone Reception .... Mar. p.9  
Band Switched All-Triode  
Converted .... Jan. p.3  
Errata—Pye Reporter .... Feb. p.12  
F.E.T. Pre-amp. for 144 Mc. Sep. p.13  
How is Your Dial Calibra-  
tion? .... Dec. p.7  
Matters Mobile .... Feb. p.3  
Netting with Transceivers .... Dec. p.9  
Noise Limiter for Mobile Use .... Jun. p.5  
Nuvistor Converters for 50,  
144, 220 and 432 Mc. .... Jul. p.5  
Some Thoughts on Hang A.g.c.  
Systems .... Jun. p.7  
Some Thoughts on Six Metre  
T.v.i. .... Aug. p.5  
SX28 Receiver Modifications Mar. p.2  
Transistorised Amateur Band  
Receiver:  
Part One .... Aug. p.2  
Part Two .... Sep. p.2  
Part Three .... Oct. p.11  
Part Four .... Nov. p.7  
Two-Unit Pye Base Station  
Conversion .... Jun. p.3  
Your Pye Reporter—Tunable  
or Crystal Locked .... Jul. p.2

## SIDEBAND

A.m. Final as Linear Amp. .... Sep. p.9  
Bad Sideband Signals .... Dec. p.9  
Ceramic Filters for S.s.b. .... Nov. p.13  
Class A Amplifiers .... Apr. p.11  
Commercially Made Filters .... Aug. p.9  
Crystal Filters for S.s.b. .... Aug. p.9  
Drake TR-4 Transceiver .... Sep. p.9  
Linear Amplifiers .... Apr. p.11  
Linear Amplifiers (cont.) .... May p.13  
Netting with Transceivers .... Dec. p.9  
Power Supplies for S.s.b. Ex-  
citors .... Jul. p.9  
Single Sideband—Power  
Measurements .... Dec. p.6  
Some Thoughts on Hang A.g.c.  
Systems .... Jun. p.7  
S.s.b. Transceivers .... Jan. p.17  
S.s.b. Transceivers (cont.) .... Feb. p.15  
Technical Correspondence:  
Diodes in Power Supplies .... Sep. p.17  
"The Thing"—Transistorised Nov. p.5  
Transceiver Power Supplies Dec. p.5  
Transistorised S.s.b. Genera-  
tor .... Sep. p.3

## TECHNICAL MISCELLANEOUS

Amateur Television Activities  
in South Australia .... May p.3  
Experimental F.M. Station for  
Victoria .... Feb. p.17  
Interference to Television and  
Radio Reception by Nearby  
Radio-Communications Tx's Nov. p.2  
Overlay Transistors .... Feb. p.8  
Some Low-Pass Filter De-  
signs for Amateurs .... Apr. p.9  
The Fatal Current .... Feb. p.9  
Technical Correspondence:  
Transistor Amplifier Design Oct. p.5  
Author's Reply .... Nov. p.15  
V.h.f. Net Frequencies .... May p.14

## TRADE REVIEWS

Great Circle Map .... Feb. p.13  
Toroid Baluns .... Jul. p.11

## TRANSMITTERS

Accessory Package for Trans-  
ceivers .... May p.5  
A High Stability V.f.o. for  
Receiver or Transmitter .... Nov. p.6  
An A.M.-C.W. Exciter for  
144 Mc. .... Apr. p.5  
An Experimental 100 Mc.  
Crystal Oscillator .... May p.10  
Errata—Pye Reporter .... Feb. p.12  
Matters Mobile .... Feb. p.3  
Netting with Transceivers .... Dec. p.9  
Single Package Transmitter  
for 160 and 2 Metres .... Jan. p.4  
Single Sideband—Power  
Measurements .... Dec. p.6  
Some Thoughts on Six Metre  
T.v.i. .... Aug. p.5  
The 80 and 40 Metre "Trans-  
istor Special" .... Sep. p.10  
Errata .... Oct. p.15  
Transistor Amplifier Design:  
Part One .... Sep. p.5  
Part Two .... Oct. p.7  
Part Three .... Nov. p.9  
Two-Unit Pye Base Station  
Conversion .... Jun. p.3  
6/60 Special .... May p.6

*As Modern as tomorrow!*



## *Yaesu FT-100 Transceiver*

### **FIVE BANDS — BUILT-IN POWER SUPPLY — TRANSISTORISED**

Combining all the features you expect in a modern s.s.b. transceiver, PLUS many more:-

**THE FT-100** SSB-CW-AM Transceiver incorporates a selective ultra-modern six-crystal lattice filter designed to give excellent audio quality and an easy-to-tune signal. Use of transistors ensures reliability with low current drain (Receiver fully transistorised, approx. 500 mA.; Transmit standby,  $\frac{1}{2}$  amp.; Transmitting, average 10 amp.). Now you can operate portable with safety!

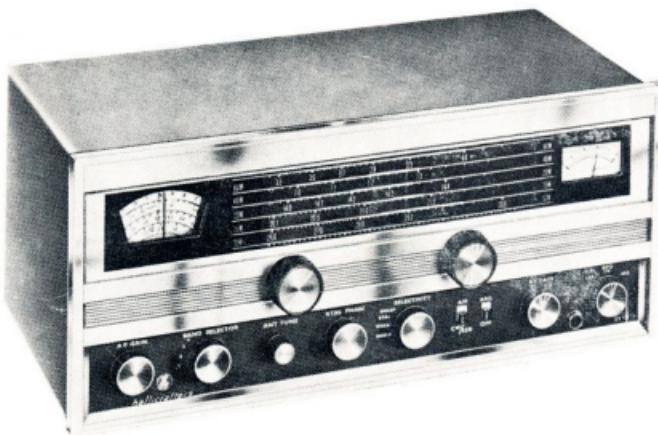
**SELF-CONTAINED** power supply is built-in, voltage regulated, can be used on 230v. a.c., 50 c/s., and 12v. d.c. simply by plugging in the special power cords provided. Makes mobile, portable or home station operation a dream.

**FACILITIES:** Selectable USB-LSB-CW-AM. Provision for external VFO, plus built-in facility of a minimum of four crystal-locked frequencies, and 100 kc. calibrator. Dial is similar to that used on the larger "F" Series equipment—precision gear driven type giving accurate linear tuning with 1 kc. readout. Exceptionally stable VFO, no warm-up. Frequency ranges: 3.5-4, 7-7.5, 14-14.5, 21-21.5, 28.5-29 Mc. Only valves used are transmitter driver 1 x 12BY7 and p.a. 2 x 6JM6 (similar 6DQ6). Rated at approx. 150w. p.e.p. input. Suitable for standard p.t.t. high impedance microphone. Dual "S" meter and p.a. cathode current, a.l.c., 10 kc. off-set tuning, variable antenna loading, antenna relay, 25 transistors, 32 diodes, 3 valves. Conservatively rated, heavy duty power transformer for best regulation and cool operation. Connections at rear for co-ax antenna line, power, speaker, VOX and linear control. Size 6" x 13" x 10 $\frac{1}{2}$ ". Professionally finished in black enamel with white etched panel. Available early in the new year. **Price £299/10/- (\$599), inc. S.T.**

**Australian Agents:** **BAIL ELECTRONIC SERVICES**  
60 Shannon St., Box Hill North, Vic. Tel. 89-2213

**VK2 Rep.: MOSMAN RADIO SERVICES**  
11 Ruby St., Mosman, N.S.W. Tel. 96-5342

# NEW FROM HALICRAFTERS



## MODEL SX-130 GENERAL COVERAGE RECEIVER

The Hallicrafters Model SX130 Communications Receiver is a four-band superheterodyne receiver tuning 535 Kc. to 31.5 Mc. The frequency range covers foreign and domestic short-wave broadcasts, amateurs, aircraft, and marine band plus standard a.m. broadcasts. The receiver provides for the reception of c.w., a.m. and s.s.b. signals over its entire tuning range, the upper or lower sideband being readily selectable by means of a front panel control. This feature greatly simplifies tuning of s.s.b. signals.

### FEATURES INCLUDE:

- Calibrated electrical bandspread on 80, 40, 20, 15, 10 metres and citizen bands.
- Slide-rule bandspread dial.
- Crystal filter.
- Product detector for c.w. and s.s.b.
- Antenna trimmer for maximum signal transfer.
- Front panel controlled automatic noise limiter.
- New handsomely styled cabinet.
- Audio power output—2 watts.
- "S" meter for accurate tuning.
- Calibrated b.f.o. for u.s.b.-l.s.b. c.w.

### FRONT PANEL CONTROLS

R.f. gain, band selector, antenna trimmer, crystal phase, selectivity, noise limiter on/off, a.m.-c.w./s.s.b. selector, b.f.o., audio gain, main tuning, bandspread tuning.

### TUBES AND FUNCTIONS

One each 6DC6, r.f. amplifier; 6EA8, mixer and oscillator; 6EA8, 1st i.f. amplifier and xtal selectivity; 6BA6, 2nd i.f. amplifier; 6AL5, a.m. detector and noise limiter; 6BE6, b.f.o./product detector; 6GW8, audio amplifier; 1N3195, rectifier.

### COVERAGE

Standard broadcast: 535-1610 Kc.; three s.w. bands: 1725 Kc. to 31.5 Mc.

Band 1: 535 Kc. to 1610 Kc. Band 2: 1725 Kc. to 4.7 Mc. Band 3: 4.5 Mc. to 13.0 Mc. Band 4: 11.9 to 31.5 Mc.

### EXTERNAL CONNECTIONS

3.2 ohm speaker and standby terminals. Terminals for single wire or double antenna, a.c. cord, audio output terminal, "S" meter electrical adjustment. Phone jack on front panel.

**W.F.S. ELECTRONICS SUPPLY CO.**

227 Victoria Road, Rydalmer, N.S.W. 638-1715

**ATLANTIC RADIO**

36 Oxford St., Woollahra, N.S.W. 31-7811